636877
V4662-

Report Number: 208-TRC-03-004

Safety Compliance Testing for FMVSS 208
Occupant Crash Protection

Honda Manufacturing of Alabama, LLC
2003 Honda Odyssey
NHTSA Number: C35306
TRC Inc. Test Number: 030610

Transportation Research Center Inc.
10820 State Route 347
East Liberty, OH 43319

Test Date: June 10, 2003
Report Date: July 29, 2003
Final Report

Prepared For:
U. S. Department of Transportation
National Highway Traffic Safety Administration
Office of Enforcement
Office of Vehicle Safety Compliance (NVS-220)
400 Seventh Street, S.W., Room No. 6115
Washington, DC 20590

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Test Performed By: Jason D. Jenkins, Senior Project Engineer

Report Approved By:

______________________________ Date ______________

Walter D. Dudek, Project Manager
Transportation Research Center Inc.

Final Report Acceptance By OVSC:

______________________________ Date 10/20/03

Contracting Officer's Technical Representative (COTR),
NHTSA, Office of Vehicle Safety Compliance

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None

16. Abstract

Compliance tests were conducted on a 2003 Honda Odyssey, NHTSA No. C35306, in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP208-12 for the determination of FMVSS 208 compliance. Possible test failures identified were as follows:

None

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Table of Contents

Section	Description	Page
Section 1	Purpose of Compliance Test	1-1
Section 2	Tests Performed	2-1
Section 3	Injury Result Summary	3-1
Section 4	Discussion of Test	4-1
Section 5	Test Data Sheets	5-1
Section 6	Test Data	6-1
Section 7	Photographs	7-1
Appendix A	Test Equipment List and Calibration Information	A-1

List of Data Sheets

Number	Description	Page
1	COTR Work Order	5-2
2	Report of Vehicle Condition	5-6
3	Certification Label and Tire Placard Information	5-8
4	Rear Outboard Seating Position Seat Belts	5-9
5	Air Bag Labels	5-10
6	FMVSS 208 Readiness Indicator	5-21
7	Passenger Air Bag Manual Cut-Off Device (S4.5.4)	5-22
8	Lap Belt Lockability (S7.1.1.5)	5-25
9	FMVSS 208 Seat Belt Warning System Check (S7.3)	5-43
10	Belt Contact Force (S7.4.3)	5-45
11	Latchplate Access (S7.4.4)	5-59
12	Seat Belt Retraction (S7.4.5)	5-67
13	Seat Belt Guides and Hardware (S7.4.6)	5-73
30	Vehicle Weight, Fuel Tank and Attitude Data	5-80
31	Vehicle Accelerometer Locations	5-84
32	Photographic Targets	5-87
33	Camera Locations	5-93
34	Dummy Positioning Procedures for Test Dummy Conforming to Subpart O of Part 572	5-95
35	Dummy Positioning Measurements	5-104
36	Crash Test	5-110
38	Accident Investigation Measurements	5-111
39	Windshield Mounting (FMVSS 212)	5-113
40	Windshield Zone Intrusion (FMVSS 219)	5-115
41	Fuel System Integrity (FMVSS 301)	5-117

Section 1

Purpose of Compliance Test

PURPOSE

This Federal Motor Vehicle Safety Standard 208 compliance test is part of a program conducted for the National Highway Traffic Safety Administration by Transportation research Center (TRC Inc.) under contract DTNH22-02-D-08062, Task Order VRTC-DCF2525. The purpose of the test was to determine whether the subject vehicle, a 2003 Honda Odyssey, NHTSA No. C35306, meets certain performance requirements of FMVSS 208, "Occupant Crash Protection"; FMVSS 212 indicant, "Windshield Mounting"; indicant FMVSS 219, "Windshield Zone Intrusion"; and FMVSS 301 indicant, "Fuel System Integrity". The compliance test was conducted in accordance with OVSC Laboratory Test Procedure No. TP-208-12 dated January 14, 2003.

Section 2

Tests Performed

TESTS PERFORMED

The following checked items indicate the tests that were performed:

X 1. Rear outboard seating position seat belts (S4.1.4.2(b) & (S4.2.4)
X 2. Air bag labels (S4.5.1)
X 3. Readiness indicator (S4.5.2)
X 4. Passenger Air Bag Manual Cut-Off Device (S4.5.4)
X 5. Lap belt lockability (S7.1.1.5)
X 6. Seat belt warning system (S7.3)
X 7. Seat belt contact force (S7.4.3)
X 8. Seat belt latch plate access (S7.4.4)
X 9. Seat belt retraction (S7.4.5)
X 10. Seat belt guides and hardware (S7.4.6)
____ 11. Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart N)
____ 12. Suppression tests with Newborn infant Subpart K dummy (Part 572, Subpart N)
____ 13. Suppression tests with 3-year-old dummy (Part 572, Subpart P)
____ 14. Suppression tests with 6-year-old dummy (Part 572, Subpart R)
____ 15. Test of Reactivation of the passenger Air Bag system with an Unbelted 5th Percentile female dummy
____ 16. Low risk deployment test with 12-month-old dummy (Part 572, Subpart N)
____ 17. Low risk deployment test with 3-year-old dummy (Part 572, Subpart P)
____ 18. Low risk deployment test with 6-year-old dummy (Part 572, Subpart R)
____ 19. Low risk deployment test with 5th female dummy (Part 572, Subpart O)
X 20. Impact tests
    ____ Frontal Oblique
        ____ Belted 50th male dummy driver and passenger (0 to 48 km/h) (S5.1.1.(a))
        ____ Unbelted 50th male dummy driver and passenger (0 to 48 km/h) (S5.1.2(a)(1))
        ____ Unbelted 50th male dummy driver and passenger (32 to 40 km/h) (S5.1.2(a)(1) or S5.1.2(b))
    X Frontal 0°
        ____ Belted 50th male dummy driver (0 to 48 km/h) (S5.1.1(b)(1) or S5.1.1(a))
        ____ Belted 50th male dummy passenger (0 to 48 km/h) (S5.1.1(b)(1) or S5.1.1(a))
        ____ Belted 5th female dummy driver (0 to 48 km/h) (S16.1(a))
        ____ Belted 5th female dummy passenger (0 to 48 km/h) (S16.1(a))
        ____ Belted 50th male dummy driver and passenger (0 to 56 km/h) (S5.1.1(b)(2)
        ____ Unbelted 50th male dummy driver and passenger (0 to 48 km/h) (S5.1.2(a)(1))
        ____ Unbelted 50th male dummy driver (32 to 40 km/h) (S5.1.2(a)(2) or S5.1.2(b))
        ____ Unbelted 50th male dummy passenger (32 to 40 km/h) (S5.1.2(a)(2) or S5.1.2(b))
        X Unbelted 5th female dummy driver (32 to 40 km/h) (S16.1(b))

_X_ Unbelted 5th female dummy passenger (32 to 40 km/h) (S16.1(b))

____ 40% Offset 0° Belted 5^{th} female dummy driver and passenger (0 to 40 km/h) (S18.1)

____ 21. Sled test: Unbelted 50th male dummy driver and passenger (S13)

____ 22. FMVSS 204 indicant test

_X_ 23. FMVSS 212 test

_X_ 24. FMVSS 219 indicant test

_X_ 25. FMVSS 301 indicant frontal test

For the crash tests, the vehicle was instrumented with 8 accelerometers. The accelerometer data from the vehicle and dummies were sampled at 12,500 samples per second and processed as specified in SAE J211/1 MAR95 and FMVSS 208, S4.13.

The dynamic tests were recorded using high speed film and digital motion picture cameras.

The vehicle appears to meet the performance requirements to which it was tested.

Section 3

Injury Result Summary

INJURY RESULT SUMMARY FOR CRASH TESTS AND/OR LOW RISK DEPLOYMENT TESTS

NHTSA No.: C35306 Test Date: 06/10/03

VIN: 5FNRL18603B084369

Frontal Crash X Offset Crash ____ Low Risk Deployment ____

Impact Angle: 0

Belted Dummies: ____ Yes X No

Speed Range: X 32 to 40 km/h ____ 0 to 48 km/h ____ 0 to 56 km/h

Test Speed: 39.3 km/h

Driver Dummy: X 5th female ____ 50th male

Passenger Dummy: X 5th female ____ 50th male

Test weight: 2121.0 kg

5th Percentile Female Frontal Crash Test
Vehicles certified to S16.1(a), S16.1(b), or S18.1

Injury Criteria	Max. Allowable Injury Assessment Values	Driver	Passenger
HIC15	700	28	44
N_{te}	1.0	0.28	0.23
N_{tf}	1.0	0.15	0.25
N_{ce}	1.0	0.00	0.19
N_{cf}	1.0	0.18	0.16
Neck tension	2620 N	531	697
Neck compression	2520 N	155	112
Chest g	60 g	26.6	27.3
Chest displacement	52 mm	31	6
Left femur	6805 N	2699	2707
Right femur	6805 N	2388	2921

Section 4

Discussion of Test

DISCUSSION OF TEST

TRC Inc. used the method of topping off the fuel (gasoline) for determining the fully loaded weight and then drained all the fuel and filled the fuel tank to 94 percent capacity with Stoddard solvent.

The vehicle did not contain an air bag label as referenced on Data Sheet 5 (Air Bag Labels 5.1.1) when received at laboratory (page 5-15); test not performed.

The vehicle's left and right side front and rear pre-test attitudes did not fall between the measured attitudes for the delivered and fully loaded conditions. Deviation was 11 mm or less.

The results of suppression and low risk deployment testing are contained in a separate report.

Section 5

Test Data Sheets

DATA SHEET 1
COTR Vehicle Work Order

Vehicle model year, make, and model: 2003 Honda Odyssey

NHTSA No.: C35306

Test Date: 06/10/03

COTR signature: Charles R. Case

Tests to be performed for this vehicle are checked below.

X 1. Rear outboard seating position seat belts (S4.1.4.2(b) & (S4.2.4)
X 2. Air bag labels (S4.5.1)
X 3. Readiness indicator (S4.5.2)
X 4. Passenger air bag manual cut-off device (S4.5.4)
X 5. Lap belt lockability (S7.1.1.5)
X 6. Seat belt warning system (S7.3)
X 7. Seat belt contact force (S7.4.3)
X 8. Seat belt latch plate access (S7.4.4)
X 9. Seat belt retraction (S7.4.5)
X 10. Seat belt guides and hardware (S7.4.6)
X 11. Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart R) using the following indicated child restraints.

Section B

		Full rearward	Mid position	Full forward
X	Britax Handle with Care 191			X
	Century Assura 4553			
	Century Avanta SE 41530			
	Century Smart Fit 4543			
	Cosco Arriva 02727			
	Cosco Opus 35 02603			
	Evenflo Discovery Adjust Right 212			
X	Evenflo First Choice 204			X
	Evenflo On My Way Position Right V 282			
X	Graco Infant 8457			X

Section C

		Full rearward	Mid position	Full forward
X	Britax Roundabout 161			X
X	Century Encore 4612			X
	Century STE 1000 4416			
	Cosco Olympian 02803			
	Cosco Touriva 02519			
	Evenflo Horizon V 425			
X	Evenflo Medallion 254			X

X 12. Suppression tests with Newborn infant (Part 572, Subpart K) using the following indicated child restraints where a child restraint is required.

Section A

		Full rearward	Mid position	Full forward
X	Cosco Dream Ride 02-719			X

X 13. Suppression tests with 3-year-old dummy (Part 572, Subpart P) using the following indicated child restraints where a child restraint is required.

Section C

		Full rearward	Mid position	Full forward
X	Britax Roundabout 161			X
X	Century Encore 4612			X
	Century STE 1000 4416			
	Cosco Olympian 02803			
	Cosco Touriva 02519			
	Evenflo Horizon V 425			
X	Evenflo Medallion 254			X

Section D
____ Britax Roadster 9004 ____ Full rearward ____ Mid position ___ Full forward
_X_ Century Next Step 4920 ____ Full rearward ____ Mid position _X_ Full forward
_X_ Cosco High Back Booster 02-442 ____ Full rearward ____ Mid position _X_ Full forward
____ Evenflo Right Fit 245 ____ Full rearward ____ Mid position ___ Full forward

_____ 14. Suppression tests with representative 3-year-old child using the following indicated child restraints where a child restraint is required. (Appendix II, Data Sheet 16II and 17II)

Section C
____ Britax Roundabout 161 ____ Full rearward ____ Mid position ___ Full forward
____ Century Encore 4612 ____ Full rearward ____ Mid position ___ Full forward
____ Century STE 1000 4416 ____ Full rearward ____ Mid position ___ Full forward
____ Cosco Olympian 02803 ____ Full rearward ____ Mid position ___ Full forward
____ Cosco Touriva 02519 ____ Full rearward ____ Mid position ___ Full forward
____ Evenflo Horizon V 425 ____ Full rearward ____ Mid position ___ Full forward
____ Evenflo Medallion 254 ____ Full rearward ____ Mid position ___ Full forward

Section D
____ Britax Roadster 9004 ____ Full rearward ____ Mid position ___ Full forward
____ Century Next Step 4920 ____ Full rearward ____ Mid position ___ Full forward
____ Cosco High Back Booster 02-442 ____ Full rearward ____ Mid position ___ Full forward
____ Evenflo Right Fit 245 ____ Full rearward ____ Mid position ___ Full forward

_X_ 15. Suppression tests with 3-year-old dummy (Part 572, Subpart P) in the following positions
_X_ Sitting on seat with back against seat back (S22.2.2.1)
_X_ Sitting on seat with back against reclined seat back (S22.2.2.2)
_X_ Sitting on seat with back not against seat back (S22.2.2.3)
_X_ Sitting on seat edge, spine vertical, hands by the child's side (S22.2.2.4)
_X_ Standing on seat, facing forward (S22.2.2.5)
_X_ Kneeling on seat facing forward (S22.2.2.6)
_X_ Kneeling on seat facing rearward (S22.2.2.7)
____ Lying on seat (S22.2.2.8)

_____ 16. Suppression tests with representative 3-year-old child in the following positions
____ Sitting on seat with back against seat back (S22.2.2.1)
____ Sitting on seat with back against reclined seat back (S22.2.2.2)
____ Sitting on seat with back not against seat back (S22.2.2.3)
____ Sitting on seat edge, spine vertical, hands by the child's side (S22.2.2.4)
____ Standing on seat, facing forward (S22.2.2.5)
____ Kneeling on seat facing forward (S22.2.2.6)
____ Kneeling on seat facing rearward (S22.2.2.7)
____ Lying on seat (S22.2.2.8)

_____ 17. Suppression tests with 6-year-old dummy (Part 572, Subpart N) using the following indicated child restraints where a child restraint is required.

Section D
____ Britax Roadster 9004 ____ Full rearward ____ Mid position ___ Full forward
____ Century Next Step 4920 ____ Full rearward ____ Mid position ___ Full forward
____ Cosco High Back Booster 02-442 ____ Full rearward ____ Mid position ___ Full forward
____ Evenflo Right Fit 245 ____ Full rearward ____ Mid position ___ Full forward

_____ 18. Suppression tests with representative 6-year-old child using the following indicated child restraints where a child restraint is required.

Section D
____ Britax Roadster 9004 ____ Full rearward ____ Mid position ___ Full forward
____ Century Next Step 4920 ____ Full rearward ____ Mid position ___ Full forward
____ Cosco High Back Booster 02-442 ____ Full rearward ____ Mid position ___ Full forward
____ Evenflo Right Fit 245 ____ Full rearward ____ Mid position ___ Full forward

_____ 19. Suppression tests with 6-year-old dummy (Part 572, Subpart N) in the following positions
____ Sitting on seat with back against seat back (S22.2.2.1)
____ Sitting on seat with back against reclined seat back (S22.2.2.2)
____ Sitting on seat edge, spine vertical, hands by the dummy's side (S22.2.2.4)
____ Sitting back in the seat and leaning on the right front passenger door (S24.2.3)

____ 20. Suppression tests with representative 6-year-old child in the following positions
____ Sitting on seat with back against seat back (S22.2.2.1)
Sitting on seat with back against reclined seat back (S22.2.2.2)
Sitting on seat edge, spine vertical, hands by the dummy's side (S22.2.2.4)
Sitting back in the seat and leaning on the right front passenger door (S24.2.3)

_X_ 21. Test of Reactivation of the Passenger Air Bag System with an Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3) Perform this test after the following suppression test(s): __________
Perform following each child restraint suppression test. (12 total)

22. Test of Reactivation of the Passenger Air Bag System with a representative 5th Percentile Female (S20.3, 22.3, S24.3) Perform this test after the following suppression test(s): __________

____ 23. Low risk deployment test with 12-month-old dummy (Part 572, Subpart R) using the following indicated child restraints.

Section B

____ Britax Handle with Care 191	____ Full rearward	____ Mid position	____ Full forward
Century Assura 4553	____ Full rearward	____ Mid position	____ Full forward
____ Century Avanta SE 41530	____ Full rearward	____ Mid position	____ Full forward
____ Century Smart Fit 4543	____ Full rearward	____ Mid position	____ Full forward
____ Cosco Arriva 02727	____ Full rearward	____ Mid position	____ Full forward
Cosco Opus 35 02603	____ Full rearward	____ Mid position	____ Full forward
____ Evenflo Discovery Adjust Right 212	____ Full rearward	____ Mid position	____ Full forward
____ Evenflo First Choice 204	Full rearward	____ Mid position	____ Full forward
____ Evenflo On My Way Position Right V 282	____ Full rearward	____ Mid position	____ Full forward
____ Graco Infant 8457	____ Full rearward	____ Mid position	____ Full forward

Section C

Britax Roundabout 161	Full rearward	____ Mid position	____ Full forward
Century Encore 4612	____ Full rearward	____ Mid position	____ Full forward
Century STE 1000 4416	____ Full rearward	____ Mid position	____ Full forward
____ Cosco Olympian 02803	____ Full rearward	Mid position	Full forward
____ Cosco Touriva 02519	____ Full rearward	____ Mid position	____ Full forward
____ Evenflo Horizon V 425	____ Full rearward	____ Mid position	____ Full forward
____ Evenflo Medallion 254	____ Full rearward	Mid position	Full forward

____ 24. Low risk deployment test with 3 year old dummy (Part 572, Subpart P) in the following positions
____ Position 1
____ Position 2

_X_ 25. Low risk deployment test with 6-year-old dummy (Part 572, Subpart N) in the following positions
_X_ Position 1
_X_ Position 2

_X_ 26. Low risk deployment test with 5th female dummy (Part 572, Subpart O) in the following positions
_X_ Position 1
_X_ Position 2

X 27. Impact tests
____ Frontal Oblique Test Speed __________
____ Belted 50th male dummy driver and passenger ((0 to 48 km/h) (S5.1.1.(a))
Unbelted 50th male dummy driver and passenger ((0 to 48 km/h) (S5.1.2(a)(1))
____ Unbelted 50th male dummy driver and passenger ((32 to 40 km/h) (S5.1.2(a)(1) or S5.1.2(b))
____ Frontal 0° Test Speed 39 ± 0.8 km/h per Charles Case e-mail (target 24.4 mph)
____ Belted 50th male dummy driver ((0 to 48 km/h) (S5.1.1(b)(1) or S5.1.1(a))
____ Belted 50th male dummy passenger ((0 to 48 km/h) (S5.1.1(b)(1) or S5.1.1(a))
____ Belted 5th female dummy driver ((0 to 48 km/h) (S16.1(a))
Belted 5th female dummy passenger ((0 to 48 km/h) (S16.1(a))
____ Belted 50th male dummy driver and passenger ((0 to 56 km/h) (S5.1.1(b)(2)(
____ Unbelted 50th male dummy driver and passenger ((0 to 48 km/h) (S5.1.2(a)(1))

____ Unbelted 50th male dummy driver (32 to 40 km/h) (S5.1.2(a)(2) or S5.1.2(b))
____ Unbelted 50th male dummy passenger (32 to 40 km/h) (S5.1.2(a)(2) or S5.1.2(b))
_X_ Unbelted 5th female dummy driver (32 to 40 km/h) (S16.1(b))
_X_ Unbelted 5th female dummy passenger (32 to 40 km/h) (S16.1(b))
____ 40% Offset 0° Belted 5th female dummy driver and passenger (0 to 40 km/h) (S18.1)
Test Speed ________

_____ 28. Sled test: Unbelted 50th male dummy driver and passenger (S13)
_____ 29. FMVSS 204 indicant test
_X_ 30. FMVSS 212 test
_X_ 31. FMVSS 219 indicant test
_X_ 32. FMVSS 301 frontal test

DATA SHEET 2

Page 1 of 2

REPORT OF VEHICLE CONDITION

CONTRACT NO. DTNH22-02-D-08062 Date: 06/10/03
FROM: Transportation Research Center, Virginia L. Watters
Lab & rep name
TO: Charles R. Case OVSC, NSA-31
COTR Name
PURPOSE: ( ) Initial Receipt ( ) Received via Transfer (X) Present vehicle condition
MODEL YEAR/MAKE/MODEL/BODY STYLE: 2003/Honda/Odyssey/MPV
MANUFACTURE DATE: 03/03 NHTSA NO.: C35306 BODY COLOR: Blue
VIN: 5FNRL18603B084369 GVWR 2570 GAWR (Fr) 1285 GAWR (Rr) 1290
ODOMETER READINGS: ARRIVAL 71 miles DATE 06/06/03
COMPLETION 71 miles DATE 06/10/03
PURCHASE PRICE: $______ DEALER'S NAME:______

A. All options listed on "window sticker" are present on the test vehicle.
___ Yes ___ No

B. Tires and wheel rims are new and the same as listed.
___ Yes ___ No

C. There are no dents or other interior or exterior flaws.
___ Yes _X_ No

D. The vehicle has been properly prepared and is in running condition.
_X_ Yes ___ No

E. Keyless remote is available and working.
_X_ Yes ___ No

F. The glove box contains an owner's manual, warranty document, consumer information, and extra set of keys.
_X_ Yes ___ No

G. Proper fuel filler cap is supplied on the test vehicle.
_X_ Yes ___ No

H. Using permanent marker, identify vehicle with NHTSA number and FMVSS test type(s) on roof line above driver door or for school buses, place a placard with NHTSA number inside the windshield and to the exterior front and rear side of bus.
_X_ Yes ___ No

I. Place vehicle in storage area.
_X_ Yes ___ No

J. Inspect the vehicle's interior and exterior, including all windows, seats, doors, etc., To confirm that each system is complete and functional per the manufacturer's specifications. Any damage, misadjustment, or other unusual condition that could influence the test program or test results shall be recorded. Report any abnormal condition to the NHTSA COTR before beginning any test.
_X_ Vehicle OK ___ Conditions reported below in comment section

Identify the letter above to which any of the following comments apply.
Comments: In a frontal impact, the vehicle sustained significant front end and unknown structural damage.

DATA SHEET 2

Page 2 of 2

REPORT OF VEHICLE CONDITION AT THE COMPLETION OF TESTING

LIST OF FMVSS TESTS PERFORMED BY THIS LAB:
208, 212, 219 Indicant, 301 Frontal

MODEL YEAR/MAKE/MODEL/BODY STYLE: 2003/Honda/Odyssey/MPV

NHTSA NO. C35306

REMARKS: None

Equipment that is no longer on the test vehicle as noted on previous page: None

Explanation for equipment removal: The owner's manual is stored with the project file.

Test Vehicle Condition: In a frontal impact, the vehicle sustained significant front end and unknown structural damage.

RECORDED BY:
DATE:

APPROVED BY:
DATE:

##

RELEASE OF TEST VEHICLE

The vehicle described above is released from TRC Inc. (Laboratory) to be delivered to ____________ (Laboratory)

Date: ____________ Time: ____________ Odometer: ____________

Lab Representative: ____________
Signature Title

Carrier/Customer Representative: ____________
Signature Date

DATA SHEET 3

Certification Label and Tire Placard Information

NHTSA No.: C35306 Test Date: 06/06/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

1. Certification Label
   Manufacturer Honda Manufacturing of Alabama, LLC
   Date of Manufacture 03/03
   VIN 5FNRL18603B084369
   Vehicle certified as: ____ Passenger car X MPV ____ Truck ____ Bus
   Front axle GVWR 1285 kg/2833 lbs.
   Rear axle GVWR 1290 kg/2845 lbs.
   Total GVWR 2570 kg/5665 lbs.

2. Tire Placard
   ___ N/A – Vehicle is not a passenger car and does not have a tire placard.
   X This is not a passenger car (see the item 1 above), but all or part of this information is still contained on a vehicle label and is reported here.

Vehicle Capacity Weight	1158 lbs.
Designated seating capacity front	N/A
Designated seating capacity rear	N/A
Total Designated seating capacity	N/A
Recommended cold tire inflation pressure front	250 kPa/36 psi
Recommended cold tire inflation pressure rear	250 kPa/36 psi
Recommended tire size	P225/60R16 98T

DATA SHEET 4
REAR OUTBOARD SEATING POSITION SEAT BELTS

NHTSA No.: C35306 Test Date: 06/06/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

Do all rear outboard seating positions have type 2 seat belts? Yes X ; No ______

If NO, describe the seat belt installed, the seat location, and any other information about the seat that would explain why a type 2 seat belt was not installed.

REMARKS:

DATA SHEET 5
AIR BAG LABELS (S4.5.1)

NHTSA No.: C35306 Test Date: 06/06/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

1. Air Bag Maintenance Label and Owner's Manual Instructions: (S4.5.1(a))

1.1 Does the manufacturer recommend periodic maintenance or replacement of the air bag?
___ Yes (Go to 1.2); _X_ No (Go to 2)

1.2 Does the vehicle have a label specifying air bag maintenance or replacement?
___ Yes-Pass; ___ **No-FAIL**

1.3 Does the label contain one of the following?
___ Yes-Pass; **No-FAIL**
Check applicable schedule
___ Schedule on label specifies month and year (Record date)
___ Schedule on label specifies vehicle mileage (Record mileage ______)
___ Schedule on label specifies interval measured from date on certification label
(Record interval ______________)

1.4 Is the label permanently affixed within the passenger compartment such that it cannot be removed without destroying or defacing the label or the sunvisor?
___ Yes-Pass; ___ **No-FAIL**

1.5 Is the label lettered in English?
___ Yes-Pass; ___ **No-FAIL**

1.6 Is the label in block capitals and numerals?
___ Yes-Pass; ___ **No-FAIL**

1.7 Are the letters and numerals at least 3/32 inches high?
____ height of letters and numerals
___ Yes-Pass; ___ **No-FAIL**

1.8 Does the owner's manual set forth the recommended schedule for maintenance or replacement? ____ Yes-Pass; ____ **No-FAIL**

2. Does the owner's manual: (S4.5.1(f))

2.1 Include a description of the vehicle's air bag system in an easily understandable format?
_X_ Yes-Pass; ___ **No-FAIL**

2.2 Include a statement that the vehicle is equipped with an air bag and a lap/shoulder belt at the front outboard seating positions?
_X_ Yes-Pass; ___ **No-FAIL**

2.3 Include a statement that the air bag is a supplemental restraint at the front outboard seating positions?
_X_ Yes-Pass; ___ **No-FAIL**

2.4 Emphasize that all occupants, including the driver, should always wear their seat belts whether or not an air bag is also provided at their seating positions to minimize the risk of severe injury or death in the event of a crash?
_X_ Yes-Pass; ___ **No-FAIL**

2.5 Provide any necessary precautions regarding the proper positioning of occupants, including children, at seating positions equipped with air bags to ensure maximum safety protection for those occupants?
_X_ Yes-Pass; ___ **No-FAIL**

2.6 Explain that no objects should be placed over or near the air bag on the steering wheel or on the instrument panel, because any such objects could cause harm if the vehicle is in a crash severe enough to cause the air bag to inflate?

_X_ Yes-Pass; ___ **No-FAIL**

2.7 Is the vehicle certified to meet the requirements of S14.5, S15, S17, S19, S21, S23, and S25? **(Obtain the answer to this question from the COTR.)** (S4.5.1(f)(2))
_X_ Yes (go to 2.7.1); ___ No (go to 3)

2.7.1 Explain the proper functioning of the advanced air bag system? (S4.5.1(f)(2))
_X Yes-Pass; **No-FAIL**

2.7.2 Provide a summary of the actions that may affect the proper functioning of the system? (S4.5.1(f)(2))
_X Yes-Pass; **No-FAIL**

2.7.3 Present and explain the main components of the advanced passenger air bag system? (S4.5.1(f)(2)(i))
_X_ Yes-Pass; ___ **No-FAIL**

2.7.4 Explain how the components function together as part of the advanced passenger air bag system? (S4.5.1 (f)(2)(ii))
_X_ Yes-Pass; ___ **No-FAIL**

2.7.5 Contain the basic requirements for proper operation, including an explanation of the actions that may affect the proper functioning of the system? (S4.5.1(f)(2)(iii))
_X_ Yes-Pass; _ **No-FAIL**

2.7.6 Is the vehicle certified to the requirements of S19.2, S21.2 or S23.2 (automatic suppression)?
_X_ Yes, continue with 2.7.6
___ No, go to 2.7.7

2.7.6.1 Contain a complete description of the passenger air bag suppression system installed in the vehicle, including a discussion of any suppression zone? (S4.5.1(f)(2)(iv))
_X_ Yes-Pass; _ **No-FAIL**

2.7.6.2 Discuss the telltale light, specifying its location in the vehicle and explaining when the light is illuminated?
_X_ Yes-Pass; ___ **No-FAIL**

2.7.7 Explain the interaction of the advanced passenger air bag system with other vehicle components, such as seat belts, seats or other components? (S4.5.1(f)(2)(v))
X_ Yes-Pass; ___ **No-FAIL**

2.7.8 Summarize the expected outcomes when child restraint systems, children and small teenagers or adults are both properly and improperly positioned in the passenger seat, including cautionary advice against improper placement of child restraint systems? (S4.5.1(f)(2)(vi))
_X_ Yes-Pass; ___ **No-FAIL**

2.7.9 Provide information on how to contact the vehicle manufacturer concerning modifications for persons with disabilities that may affect the advanced air bag system? (S4.5.1(f)(2)(vii))
_X_ Yes-Pass; ___ **No-FAIL**

3. Sun Visor Air Bag Warning Label (S4.5.1 (b)) Check only one of the following:
___ The vehicle is not certified to meet the requirements of S19, S21, and S23. **(Obtain the answer to this question from the COTR.)** (S4.5.1(b)(1)) Go to 3.1 and skip 3.2 and 3.3
___ The vehicle is certified to meet the requirements of S19, S21, and S23 before 9/1/03. **(Obtain the answer to this question from the COTR.)** (S4.5.1(b)(2)) Go to 3.2 and skip 3.1 and 3.3
X_ The vehicle is certified to meet the requirements of S19, S21, and S23 on 9/1/03 or later. **(Obtain the answer to this question from the COTR.)** (S4.5.1(b)(3)) Go to 3.3 and skip 3.1 and 3.2

3.1 Vehicles not certified to meet the requirements of S19, S21, and S23.

3.1.1 Is the label permanently affixed (including permanent marking on the visor material or molding into the visor material) to either side of the sun visor at each front outboard seating position such that it cannot be removed without destroying or defacing it? (S4.5.1 (b)(1))
Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side _ Yes-Pass ___ **No-FAIL**

3.1.2 Does the label conform in content to the label shown in either Figure 6a or 6b (Figure 6b is for vehicles with passenger air bag on-off switches), as appropriate, at each front outboard seating position? (S4.5.1 (b)(1)) **(Vehicles without back seats may omit the statement: "The BACK SEAT is the SAFEST place for children." (S4.5.1(b)(1)(iv)))**

Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.1.3 Is the label heading area yellow with the word "WARNING" and the alert symbol in black? (S4.5.1 (b)(1)(i))

Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.1.4 Is the message area white with black text? (S4.5.1(b)(1)(ii))

Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.1.5 Is the message area at least 30 cm^2? (S4.5.1(b)(1)(ii))

Driver side: Length ________, Width ________
Passenger side: Length ________, Width ________
Driver actual message area ________ cm^2
Passenger actual message area ________ cm^2
Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.1.6 Is the pictogram black with a red circle and slash on a white background? (S4.5.1(b)(2)(iii))

Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.1.7 Is the pictogram at least 30 mm in diameter? (S4.5.1 (b)(2)(iii))

Driver side: Length ________
Passenger side: Length ________
Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.2 Vehicles certified to meet the requirements of S19, S21, and S23 before 9/1/03. (S4.5.1(b)(2))

3.2.1 Is the label permanently affixed (including permanent marking on the visor material or molding into the visor material) to either side of the sun visor at each front outboard seating position such that it cannot be removed without destroying or defacing the label or the sun visor? (S4.5.1 (b)(2))

Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.2.2 Does the label conform in content to the label shown in Figure 8 or Figure 11 at each front outboard seating position? (S4.5.1(b)(2)) **(Vehicles without back seats may omit the statement: "The BACK SEAT is the SAFEST place for children." (S4.5.1(b)(2)(iv)) Vehicles without back seats or the back seat is too small to accommodate a rear-facing child restraint may omit the statement "Never put a fear-facing child seat in the front." (S4.5.1(b)(2)(v)))**

Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.2.3 Is the label heading area yellow with the word "WARNING" and the alert symbol in black? (S4.5.1 (b)(2)(i))

Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.2.4 Is the message area white with black text? (S4.5.1 (b)(2)(ii))

Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.2.5 Is the message area at least 30 cm^2? (S4.5.1 (b)(2)(ii))
Driver side: Length ________, Width ________
Passenger side: Length ________, Width ________
Driver actual message area ________ cm^2
Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.2.6 Is the pictogram black on a white background? (S4.5.1(b)(2)(iii))
Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.2.7 Is the pictogram at least 30 mm (1.2 in) in length? (S4.5.1(b)(2)(iii))
Driver side: Length ________
Passenger side: Length ________
Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

3.3 Vehicles certified to meet the requirements of S19, S21, and S23 on 9/1/03 and later. (S4.5.1(b)(3))

3.3.1 Is the label permanently affixed (including permanent marking on the visor material or molding into the visor material) to either side of the sun visor at each front outboard seating position such that it cannot be removed without destroying or defacing the label or the sun visor? (S4.5.1 (b)(3))
Driver side _X_ Yes-Pass ___ **No-FAIL**
Passenger side _X_ Yes-Pass ___ **No-FAIL**

3.3.2 Does the label conform in content to the label shown in Figure 11 at each front outboard seating position? (S4.5.1(b)(2)) **(Vehicles without back seats may omit the statement: "The BACK SEAT is the SAFEST place for children." (S4.5.1(b)(3)(iv)) Vehicles without back seats or the back seat is too small to accommodate a rear-facing child restraint may omit the statement "Never put a fear-facing child seat in the front." (S4.5.1(b)(3)(v)))**
Driver side _X_ Yes-Pass ___ **No-FAIL**
Passenger side _X_ Yes-Pass ___ **No-FAIL**

3.3.3 Is the label heading area yellow with the word "WARNING" and the alert symbol in black? (S4.5.1 (b)(3)(i))
Driver side _X_ Yes-Pass ___ **No-FAIL**
Passenger side _X_ Yes-Pass ___ **No-FAIL**

3.3.4 Is the message area white with black text? (S4.5.1(b)(3)(ii))
Driver side _X_ Yes-Pass ___ **No-FAIL**
Passenger side _X_ Yes-Pass ___ **No-FAIL**

3.3.5 Is the message area at least 30 cm^2? (S4.5.1(b)(3)(ii))
Driver side: Length _115 cm_, Width _40 cm_
Passenger side: Length _115 cm_, Width _40 cm_
Driver actual message area _45.2_ cm^2
Driver side _X_ Yes-Pass ___ **No-FAIL**
Passenger side _X_ Yes-Pass ___ **No-FAIL**

3.3.6 Is the pictogram black on a white background? (S4.5.1(b)(3)(iii))
Driver side _X_ Yes-Pass ___ **No-FAIL**
Passenger side _X_ Yes-Pass ___ **No-FAIL**

3.3.7 Is the pictogram at least 30 mm in length? (S4.5.1(b)(3)(iii))
Driver side: Length _40 mm_
Passenger side: Length _40 mm_
Driver side _X_ Yes-Pass ___ **No-FAIL**
Passenger side _X_ Yes-Pass ___ **No-FAIL**

3.4 Is the same side of the sun visor that contains the air bag warning label free of other information with the exception of the air bag maintenance label and/or the rollover-warning label? (S4.5.1 (b)(5)(i))

Driver side _X_ Yes-Pass ___ **No-FAIL**
Passenger side _X_ Yes-Pass ___ **No-FAIL**

3.5 Is the sun visor free of other information about air bags or the need to wear seat belts with the exception of the air bag alert label and/or the rollover-warning label? (S4.5.1(b)(5)(ii))

Driver side _X_ Yes-Pass ___ **No-FAIL**
Passenger side _X_ Yes-Pass ___ **No-FAIL**

3.6 Does the driver side visor contain a rollover-warning label on the same side of the visor as the air bag warning label?

___ Yes (go to 3.6.1); _X_ No (go to 4., skipping 3.6.1 through 3.6.3)

3.6.1 Are both the rollover-warning label and the air bag warning label surrounded by a continuous solid-lined border?

___ Yes (go to 3.6.2 and skip 3.6.3); ___ No (go to 3.6.3 and skip 3.6.2.)

3.6.2 Is the shortest distance from the border of the rollover label to the border of the air bag warning label at least 1 cm? (575.105 (d)(1)(iv)(B))

actual distance
Yes-Pass; **No-FAIL**

3.6.3 Is the shortest distance from any of the lettering or graphics on the rollover-warning label to any of the lettering or graphics of the air bag warning label at least 3 cm? (575.105(d)(1)(iv)(A))

__________ actual distance
___ Yes-Pass; ___ **No-FAIL**

4. Air Bag Alert Label (S4.5.1(c)) (A "Rollover Warning Label" or "Rollover Alert Label" may be on the same side of the driver's sun visor as the "Air Bag Alert Label." 575.105(d))

4.1 Is the Sun Visor Warning Label visible when the sun visor is in the stowed position?

Driver side _X_ Yes ___ No
Passenger side _X_ Yes ___ No

If yes, for driver and passenger go to 5.

4.2 Is the air bag alert label permanently affixed (including permanent marking on the visor material or molding into the visor material) to the sun visor at each front outboard seating position such that it cannot be removed without destroying or defacing the label or the sun visor? (S4.5.1 (c))

Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

4.3 Is the air bag alert label visible when the visor is in the stowed position? (S4.5.1(c))

Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

4.4 Does the label conform in content to the label shown in Figure 6c? (S4.5.1(c))

Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

4.5 Is the message area black with yellow text? (S4.5.1(c)(1))

Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

4.6 Is the message area at least 20 cm^2? (S4.5.1(c)(1))

Driver side: Length _________, Width _________
Passenger side: Length _________, Width _________
Actual message area ___________ cm^2
Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

4.7 Is the pictogram black with a red circle and slash on a white background? (S4.5.1(e)(2))
Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

4.8 Is the pictogram at least 20 mm in diameter? (S4.5.1(e)(2))
Driver side: diameter __________ mm
Passenger side: diameter __________ mm
Driver side ___ Yes-Pass ___ **No-FAIL**
Passenger side ___ Yes-Pass ___ **No-FAIL**

5. Label On the Dashboard

5.1 Is the vehicle certified to meet the requirements of S19, S21, and S23? **(Obtain the answer to this question from the COTR.)** (S4.5.1(e)(2))
_X_ Yes (go to 5.1.1 and skip 5.2)
__ No (go to 5.2, skipping 5.1.1 through 5.1.6)

5.1.1 Does the vehicle have a label on the dash or steering wheel hub? (S4.5.1(e)(2))
___ Yes-Pass; ___ **No-FAIL** Label had been removed; test not performed.

5.1.2 Is the label clearly visible from all front seating positions? (S4.5.1(e)(2))
___ Yes-Pass; ___ **No-FAIL**

5.1.3 Does the label conform in content to the label shown in Figure 9? (S4.5.1(e)(2)) **(Vehicles without back seats may omit the statement: "The back seat is the safest place for children." (S4.5.1(e)(2)(iii)))**
___ Yes-Pass; ___ **No-FAIL**

5.1.4 Is the heading area yellow with black text? (S4.5.1(e)(2)(i)
___ Yes-Pass; ___ **No-FAIL**

5.1.5 Is the message white with black text? (S4.5.1(e)(2)(ii))
___ Yes-Pass; ___ **No-FAIL**

5.1.6 Is the message area at least 30 cm^2? (S4.5.1(e)(2)(ii))
Length ___, Width ___
Actual message area ___ cm^2
___ Yes-Pass; ___ **No-FAIL**

5.2 Does the vehicle have a label on the dash or steering wheel hub? (S4.5.1(e)(1))
___ Yes-Pass; ___ **No-FAIL**

5.2.1 Is the label clearly visible from all front seating positions? (S4.5.1(e)(1))
___ Yes-Pass; ___ **No-FAIL**

5.2.2 Does the label conform in content to the label shown in Figure 7? (S4.5.1 (e)(1)(iii)) **(Vehicles without back seats may omit the statement: "The back seat is the safest place for children 12 and under." (S4.5.1(e)(2)(iii)))**
___ Yes-Pass; ___ **No-FAIL**

5.2.3 Is the heading area yellow with the word "WARNING" and the alert symbol in black? (S4.5.1 (e)(1)(i)
___ Yes-Pass; ___ **No-FAIL**

5.2.4 Is the message white with black text? (S4.5.1(e)(1)(ii))
___ Yes-Pass; ___ **No-FAIL**

5.2.5 Is the message area at least 30 cm^2? (S4.5.1(e)(1)(ii))
Length ______, Width ________
Actual message area __________ cm^2
___ Yes-Pass; ___ **No-FAIL**

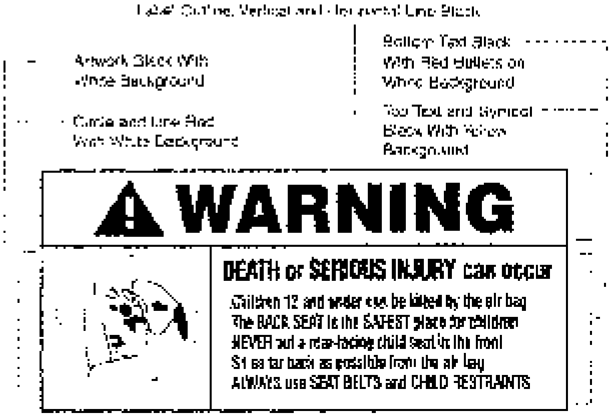

Label Outline, Vertical and Horizontal Line Black
Artwork Black With White Background
Circle and Line Red With White Background
Bottom Text Black With Red Bullets on White Background
Top Text and Symbol Black With Yellow Background
WARNING
DEATH or SERIOUS INJURY can occur
Children 12 and under can be killed by the air bag
The BACK SEAT is the SAFEST place for children
NEVER put a rear-facing child seat in the front
Sit as far back as possible from the air bag
ALWAYS use SEAT BELTS and CHILD RESTRAINTS

Figure 6a. Sun Visor Label Visible When Visor is in Down Position.

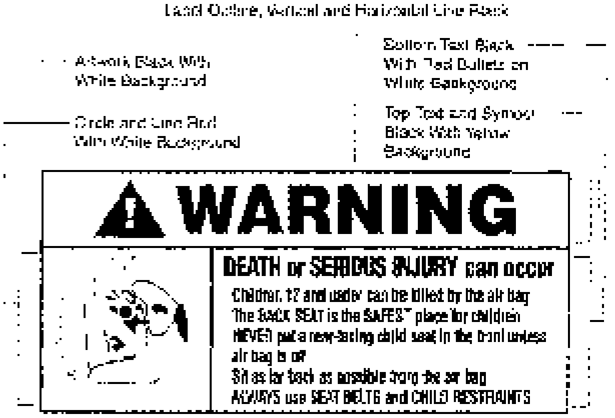

Label Outline, Vertical and Horizontal Line Black
Artwork Black With White Background
Circle and Line Red With White Background
Bottom Text Black With Red Bullets on White Background
Top Text and Symbol Black With Yellow Background
WARNING
DEATH or SERIOUS INJURY can occur
Children 12 and under can be killed by the air bag
The BACK SEAT is the SAFEST place for children
NEVER put a rear-facing child seat in the front unless air bag is off
Sit as far back as possible from the air bag
ALWAYS use SEAT BELTS and CHILD RESTRAINTS

Figure 6b. Sun Visor Label Visible When Visor is in Down Position.

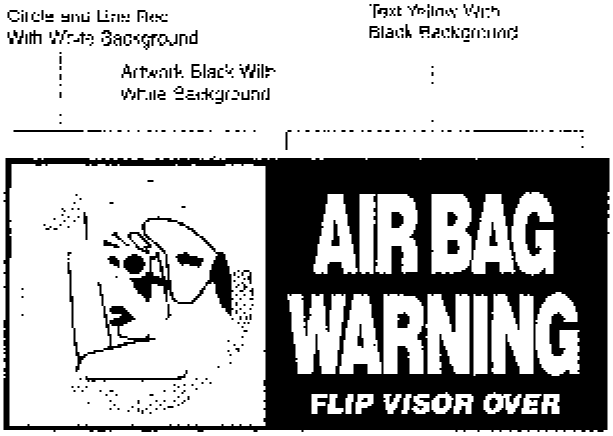
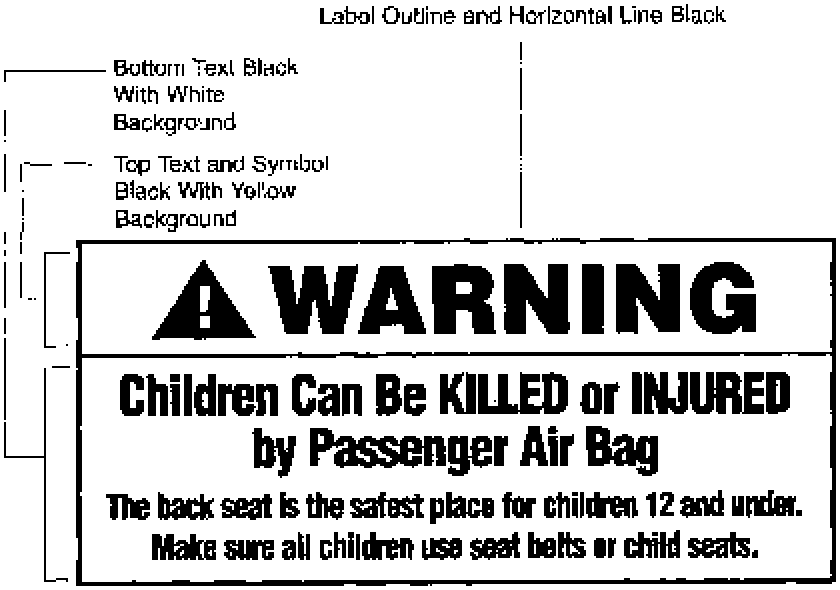

Circle and Line Red With White Background
Artwork Black With White Background
Text Yellow With Black Background
AIR BAG WARNING
FLIP VISOR OVER

Figure 6c. Sun Visor Label Visible When Visor is in Up Position.


Label Outline and Horizontal Line Black
Bottom Text Black With White Background
Top Text and Symbol Black With Yellow Background

WARNING

Children Can Be KILLED or INJURED by Passenger Air Bag

The back seat is the safest place for children 12 and under.
Make sure all children use seat belts or child seats.

Figure 7. Removable Label on Dash.

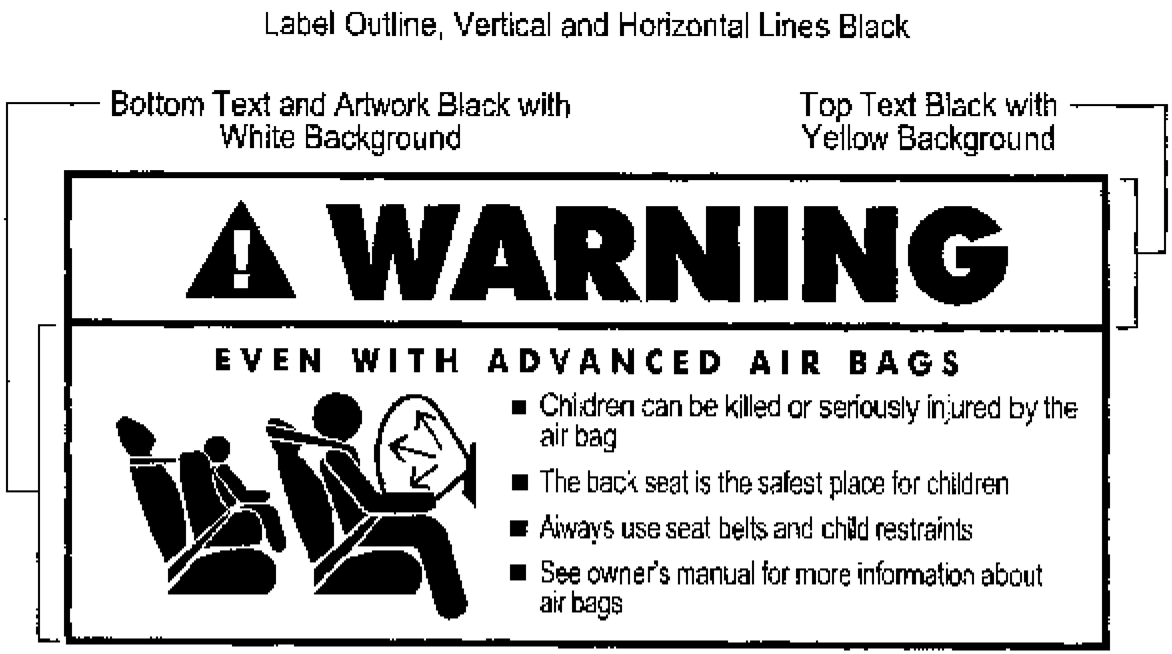
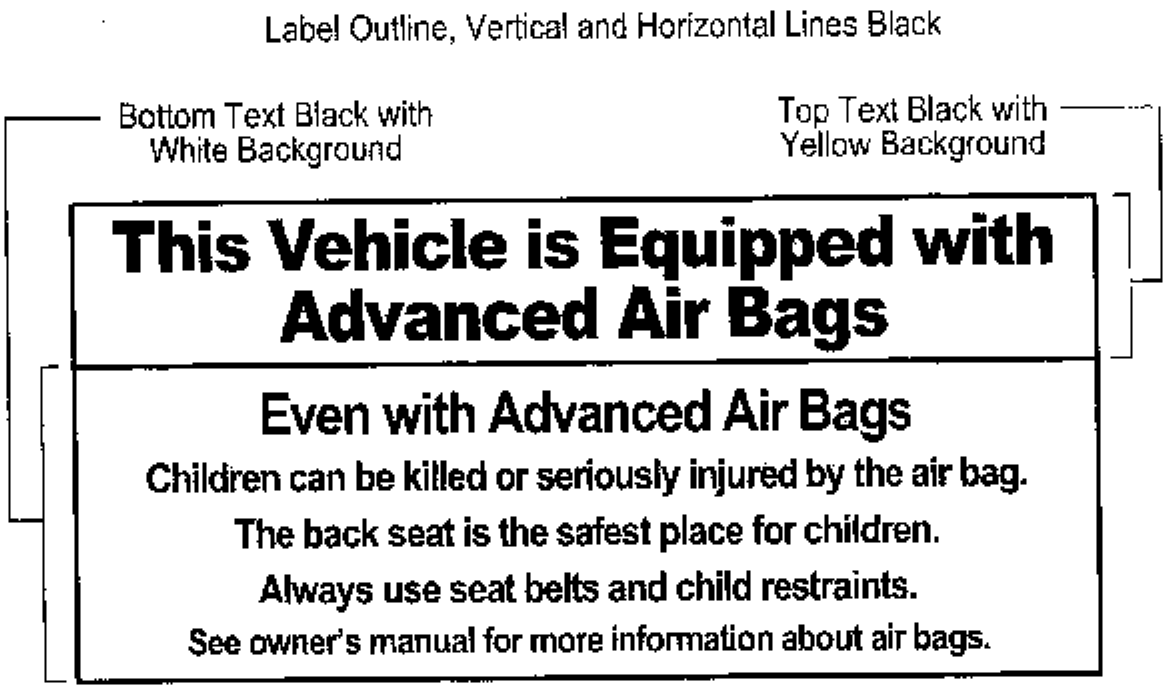

Label Outline, Vertical and Horizontal Lines Black
Bottom Text and Artwork Black with White Background
Top Text Black with Yellow Background
WARNING
EVEN WITH ADVANCED AIR BAGS
■ Children can be killed or seriously injured by the air bag
■ The back seat is the safest place for children
■ Always use seat belts and child restraints
■ See owner's manual for more information about air bags

Figure 8. Sun Visor Label Visible when Visor is in Down Position.


Label Outline, Vertical and Horizontal Lines Black
Bottom Text Black with White Background
Top Text Black with Yellow Background

This Vehicle is Equipped with Advanced Air Bags

Even with Advanced Air Bags

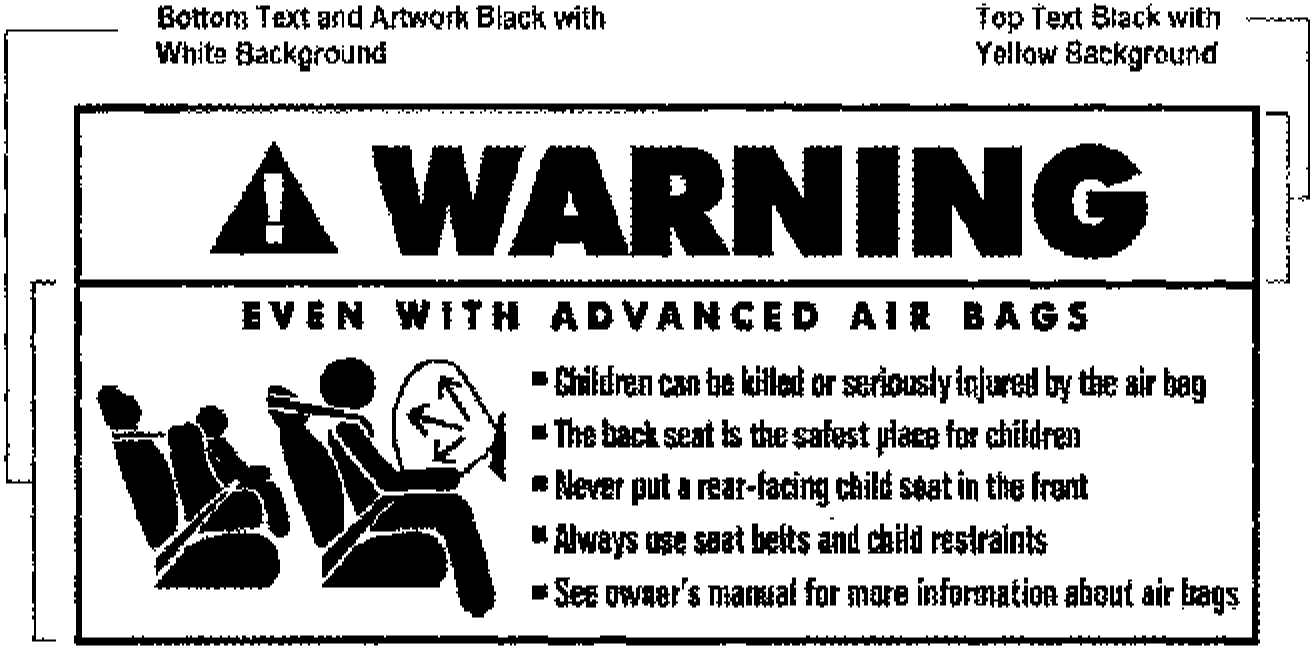
Children can be killed or seriously injured by the air bag.

The back seat is the safest place for children.

Always use seat belts and child restraints.

See owner's manual for more information about air bags.

Figure 9. Removable Label on Dash.



Bottom Text and Artwork Black with White Background
Top Text Black with Yellow Background
WARNING
EVEN WITH ADVANCED AIR BAGS

- Children can be killed or seriously injured by the air bag
- The back seat is the safest place for children
- Never put a rear-facing child seat in the front
- Always use seat belts and child restraints
- See owner's manual for more information about air bags

Figure 11. Sun Visor Label Visible when Visor is in Down Position.

DATA SHEET 6
FMVSS 208 READINESS INDICATOR (S4.5.2)

NHTSA No.: C35306 Test Date: 06/06/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

An occupant restraint system that deploys in the event of a crash shall have a monitoring system with a readiness indicator. A totally mechanical system is exempt from this requirement. (11/8/94 legal interpretation to Lawrence F. Henneberger on behalf of Breed)

_X_ 1. Is the system totally mechanical? Yes ___; No _X_
(If YES this Data Sheet is complete.)

_X_ 2. Describe the location of the readiness indicator: Upper right hand corner of instrument panel

_X_ 3. Is the readiness indicator clearly visible to the driver?
_X_ Yes-Pass; ___ **No-FAIL**

_X_ 4. Is a list of the elements in the occupant restraint system, being monitored by the readiness indicator, provided on a label or in the owner's manual?
_X_ Yes-Pass; ___ **No-FAIL**

_X_ 5. Does the vehicle have an on-off switch for the passenger air bag?
_X_ Yes (go to 6) ___ No (this form is complete)

_X_ 6. Is the air bag readiness indicator off when the passenger air bag switch is in the off position?
_X_ Yes-Pass; ___ **No-FAIL**

REMARKS.

DATA SHEET 7
Passenger Air Bag Manual Cut-Off Device (S4.5.4)

NHTSA No.: C35306 Test Date: 06/06/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

X 1. Is the vehicle equipped with an on-off switch that deactivates the air bag installed at the right front outboard seating position?
  ___ Yes, go to 2
  X No, this sheet is complete

___ 2. Does the vehicle have any forward-facing rear designated seating positions? (S4.5.4(a))
  ___ Yes, go to 3
  ___ No, go to 4

___ 3. Verification of the lack of room for a child restraint in the rear seat behind the driver's seat. (S4.5.4(b))

___ 3.1 Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
  ___ N/A – No lumbar adjustment

___ 3.2. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
  ___ N/A – No additional support adjustment

___ 3.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S16.2.10.3.1)
  ___ N/A – No independent fore-aft seat cushion adjustment

___ 3.4. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position. (S16.2.10.3.1)
  ___ N/A – No indeuendent seat cushion height adjustment.

___ 3.5. Put the seat in its full rearward position. (S16.2.10.3.1)
  ___ N/A - the seat does not have a fore-aft adjustment

___ 3.6. If the seat height is adjustable, put it in the full down position. (S16.2.10.3.1)
  ___ N/A – No seat height adjustment

___ 3.7 Draw a horizontal reference line on the side of the seat cushion.

___ 3.8. Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid-position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
  ___ N/A - The seat does not have a fore-aft adjustment.

___ 3.9. Using only the controls that change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the middle fore-aft position. (S8.1.2)
  ___ N/A – The seat does not have fore-aft adjustment.
  ___ Mid position
  If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: ___

___ 3.10. If seat adjustments, other than fore-aft, are present and the horizontal reference line is no longer horizontal, use these adjustments to maintain the reference line as closely as possible to the horizontal.
  ___ N/A - No adjustments

Angle of reference line as tested ______

____ 3.11. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S4.5.4.1 (b) and S8.1.3)

____ N/A – No seat back angle adjustment

Manufacturer's design seat back angle ______________

Tested seat back angle ______________

____ 3.12 Is the driver seat a bucket seat?

____ Yes, go to 3.12.1 and skip 3.12.2.

____ No, go to 3.12.2 and skip 3.12.1.

____ 3.12.1 Bucket seats:

____ 3.12.1.1 Locate and mark a vertical Plane B through the longitudinal centerline of the seat driver's seat cushion. (S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.

Record the width of the seat. ____________________

Record the distance from the edge of the seat to Plane B. ____

____ 3.12.1.2 Locate the longitudinal horizontal line in Plane B that is tangent to the highest point of the rear seat cushion behind the driver's seat. Measure along this line from the front of the seat back of the rear seat to the rear of the seat back of the driver's seat.

mm distance

less than 720 mm – Pass

more than 720 mm – FAIL

Go to 4

____ 3.12.2 Bench seats (including split bench seats):

____ 3.12.2.1 Locate and mark a vertical Plane B through the center of the steering wheel parallel to the vehicle longitudinal centerline.

____ 3.12.2.2 Locate the longitudinal horizontal line in Plane B that is tangent to the highest point of the rear seat cushion. Measure along this line from the front of the seat back of the rear seat to the rear of the seat back of the front seat.

mm distance

_____ less than 720 mm – Pass

_____ more than 720 mm – FAIL

Go to 4

____ 4. Does the device turn the air bag on and off using the vehicle's ignition key? (S4.5.4.2)

____ Yes-Pass; ____ **No-FAIL**

____ 5 Is the on-off device separate from the ignition switch? (S4.5.4.2)

____ Yes-Pass; ____ **No-FAIL**

____ 6. Is there a telltale light that comes on when the passenger air bag is turned off? (S4.5.4.2)

____ Yes-Pass; ____ **No-FAIL**

____ 7. Telltale light (S4.5.4.3)

____ 7.1 Is the light yellow? S4.5.4.3(a))

____ Yes-Pass; ____ **No-FAIL**

____ 7.2 Are the words "PASSENGER AIR BAG OFF" (S4.5.4.3(b))

____ 7.2.1 on the telltale?

____ Yes – Pass; go to 7.3

____ No – go to 7.2.2

____ 7.2.2 within 25 mm of the telltale? ________mm from the edge of the telltale light

____ Yes-Pass; ____ **No-FAIL**

____ 7.3 Does the telltale remain illuminated while the air bag is turned off? (S4.5.4.3c)) (Leave the air bag off for 5 minutes.)

____ Yes-Pass; ____ **No-FAIL**

___ 7.4 Is the telltale illuminated while the air bag is turned on? (S4.5.4.3(d))

___ Yes-Pass; ___ **No-FAIL**

___ 7.5 Is the telltale combined with the air bag readiness indicator? (S4.5.3(e))

___ Yes- **FAIL**; ___ No-Pass

___ 8. Owner's manual

___ 8.1 Does the owner's manual contain complete instructions on the operation of the on-off switch? (S4.5.4.4(a))

___ Yes-Pass; ___ **No-FAIL**

___ 8.2 Does the owner's manual contain a statement that the on-off switch should only be used when a member of one of the following risk groups is occupying the right front passenger seating position? (S4.5.4.4(b))

Infants:	there is no back seat
	the rear seat is too small to accommodate a child restraint
	there is a medical condition that must be monitored constantly
Children aged 1 to 12:	there is no back seat
	space is not always available in the rear seat
	there is a medical condition that must be monitored constantly
Medical condition:	medical risk causes special risk for passenger
	greater risk for harm than with the air bag on

___ Yes-Pass; ___ **No-FAIL**

___ 8.3 Does the owner's manual contain a warning about the safety consequences of using the on-off switch at other times?

___ Yes-Pass; ___ **No-FAIL**

DATA SHEET 8

LAP BELT LOCKABILITY

Passenger cars, trucks, buses, and multipurpose passenger
vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are **not solely** automatic locking retractors. (S7.1.1.5(c))

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Front Row Right

___ N/A – No retractor is at this position
N/A – The retractor is an automatic locking retractor ONLY

X 1. Record test fore-aft seat position. Full rear (S7.1.1.5 (c)(1))
(Any position is acceptable.)

X 2. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))
X Yes-Pass; ___ **No-FAIL**

X 3. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))
X Yes-Pass; ___ **No-FAIL**

X 4. Buckle the seat belt. (S7.1.1.5(c)(1))

X 5. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

X 6. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

X 7. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
___ Yes; X No (If yes, go to 7.1. If no, go to 8.)

___ 7.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))
___ Yes-Pass; ___ **No-FAIL**

X 8. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

X 9. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
Measured distance between A and B 40.5 inches

X 10. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

_X_ 11. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle __10°__________ (spec. 5 - 15 degrees)

_X_ 12. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B __7.9__________ inches

_X_ 13. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate 25________ lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))

Measured distance between A and B __8.2__________ inches (S7.1.1.5(c)(6))

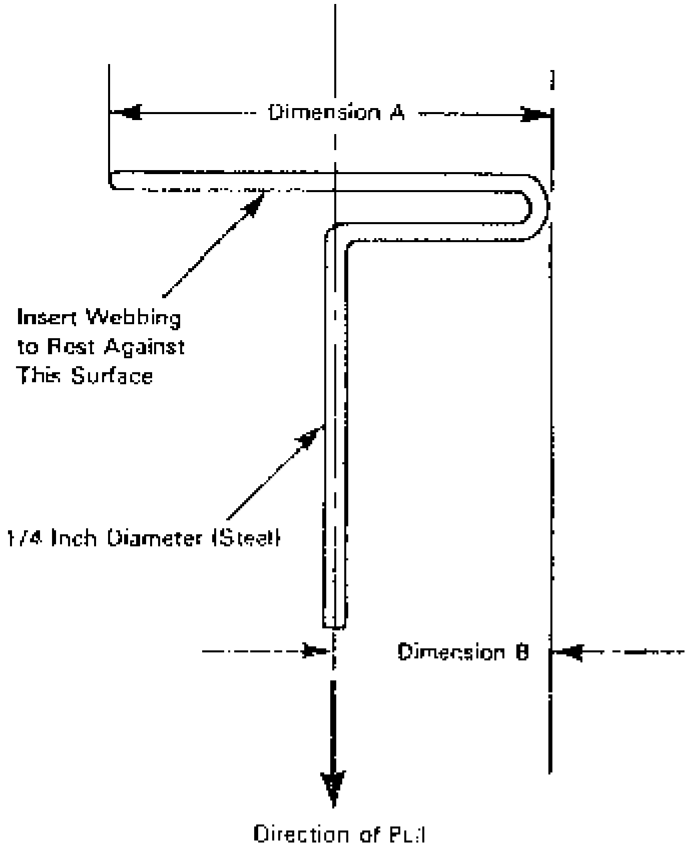
_X_ 14. Subtract the measurement in 13 from the measurement in 12. Is the difference 2 inches or less? (S7.1.1.5(c)(7)) 13-12= 0.3 inches;

X Yes-Pass; ___ **No-FAIL**

_X_ 15. Subtract the measurement in 9 from the measurement in 13. Is the difference 3 inches or more? (S7.1.1.5(c)(8)) 9-13= _32.3__ inches;

_X_ Yes-Pass; ___ **No-FAIL**

REMARKS:


Dimension A
Insert Webbing to Rest Against This Surface
1/4 Inch Diameter (Steel)
Dimension B
Direction of Pull

Dimension A - Width of Webbing Plus 1/2 Inch

Dimension B - 1/2 of Dimension A

Figure 5. - Webbing Tension Pull Device

DATA SHEET 8
LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Second Row Left

___ N/A No retractor is at this position
___ N/A The retractor is an automatic locking retractor ONLY

X 1. Record test fore-aft seat position. Full rear (S7.1.1.5 (c)(1))
(Any position is acceptable.)

X 2. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))
X Yes-Pass; ___ **No-FAIL**

X 3. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))
X Yes-Pass; **No-FAIL**

X 4. Buckle the seat belt. (S7.1.1.5(c)(1))

X 5. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

X 6. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

X 7. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
___ Yes; X No (If yes, go to 7.1. If no, go to 8.)

___ 7.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))
___ Yes-Pass; ___ **No-FAIL**

X 8. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1 1.5(c)(2) & S7.1.1.5(c)(1))

X 9. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
Measured distance between A and B 53.1 inches

X 10. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

_X_ 11. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))
Measured force application angle 10°____________ (spec. 5 - 15 degrees)

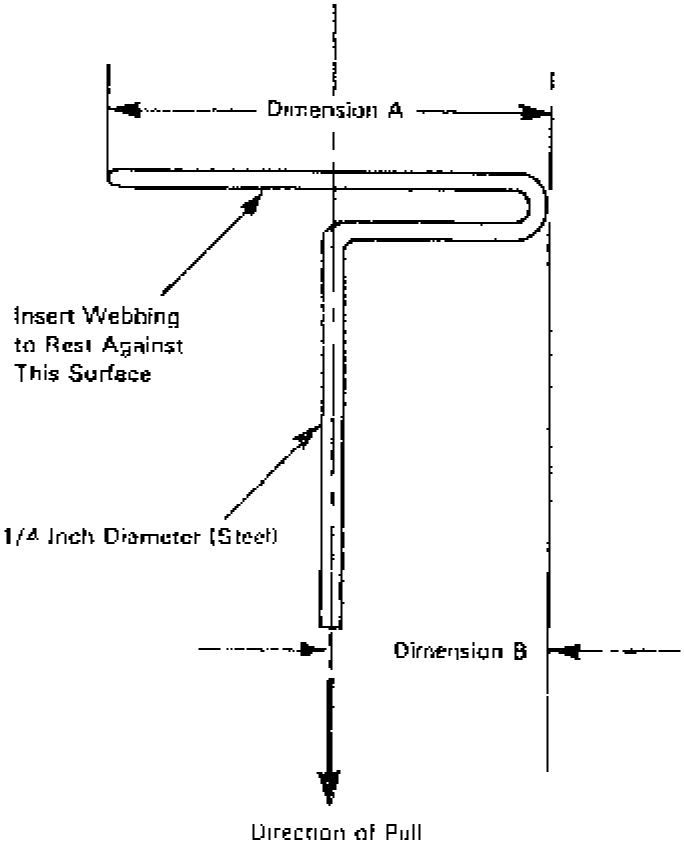
X 12. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))
Measured distance between A and B 14.3 inches

_X_ 13. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))
Record onset rate __25____ lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))
Measured distance between A and B__14.6________ inches (S7.1.1.5(c)(6))

_X_ 14. Subtract the measurement in 13 from the measurement in 12. Is the difference 2 inches or less? (S7.1.1.5(c)(7)) 13-12 __0.2__ inches;
_X_ Yes-Pass; **No-FAIL**

_X_ 15 Subtract the measurement in 9 from the measurement in 13. Is the difference 3 inches or more? (S7.1.1.5(c)(8)) 9-13=__38.5__ inches;
X Yes-Pass; ___ **No-FAIL**

REMARKS:


Dimension A
Insert Webbing to Rest Against This Surface
1/4 Inch Diameter (Steel)
Dimension B
Direction of Pull

Dimension A - Width of Webbing Plus 1/2 Inch

Dimension B - 1/2 of Dimension A

Figure 5. - Webbing Tension Pull Device

DATA SHEET 8
LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Second Row Right

___ N/A – No retractor is at this position
N/A – The retractor is an automatic locking retractor ONLY

X 1. Record test fore-aft seat position. Full rear (S7.1.1.5 (c)(1)) (Any position is acceptable.)

X 2. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))
X Yes-Pass; ___ **No-FAIL**

X 3. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))
X Yes-Pass; ___ **No-FAIL**

X 4. Buckle the seat belt. (S7.1.1.5(c)(1))

X 5. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

X 6. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

X 7. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
___ Yes; X No (If yes, go to 7.1. If no, go to 8.)

__ 7.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))
__ Yes-Pass; **No-FAIL**

X 8. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

X 9. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
Measured distance between A and B 53.0 inches

X 10. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

_X_ 11. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees not more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle __ 10°________ (spec. 5 - 15 degrees)

_X_ 12. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B___14.2___________ inches

_X_ 13. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate __25 ______ lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))

Measured distance between A and B__ 14.4 ____ inches (S7.1.1.5(c)(6))

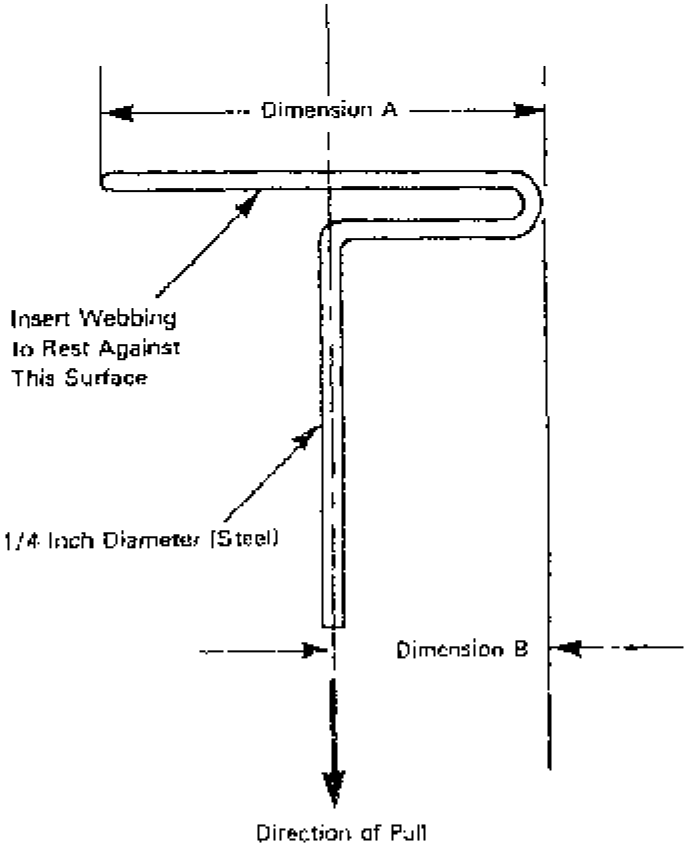
_X 14. Subtract the measurement in 13 from the measurement in 12. Is the difference 2 inches or less? (S7.1.1.5(c)(7)) 13-12= 0.3 inches;

_X Yes-Pass; _ **No-FAIL**

_X_ 15. Subtract the measurement in 9 from the measurement in 13. Is the difference 3 inches or more? (S7.1.1.5(c)(8)) 9-13 _38.5___ inches;

_X_ Yes-Pass; ___ **No-FAIL**

REMARKS:


Dimension A
Insert Webbing to Rest Against This Surface
1/4 Inch Diameter (Steel)
Dimension B
Direction of Pull

Dimension A - Width of Webbing Plus 1/2 Inch

Dimension B - 1/2 of Dimension A

Figure 5. - Webbing Tension Pull Device

DATA SHEET 8
LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Third Row Left

___ N/A – No retractor is at this position
___ N/A – The retractor is an automatic locking retractor ONLY

X 1. Record test fore-aft seat position. Fixed (S7.1.1.5 (c)(1)) (Any position is acceptable.)

X 2. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))
X Yes-Pass; ___ **No-FAIL**

X 3. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))
X Yes-Pass; ___ **No-FAIL**

X 4. Buckle the seat belt. (S7.1.1.5(c)(1))

X 5. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

X 6. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

X 7. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
___ Yes; X No (If yes, go to 7.1. If no, go to 8.)

_ 7.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))
__ Yes-Pass; ___ **No-FAIL**

X 8. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

X 9. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
Measured distance between A and B 40.2 inches

X 10. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

_X_ 11. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle ___10°___________ (spec. 5 - 15 degrees)

_X_ 12. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B__ 14.9 __________ inches

_X_ 13. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate _ 25__ ____ lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))

Measured distance between A and B__15.1__________ inches (S7.1.1.5(c)(6))

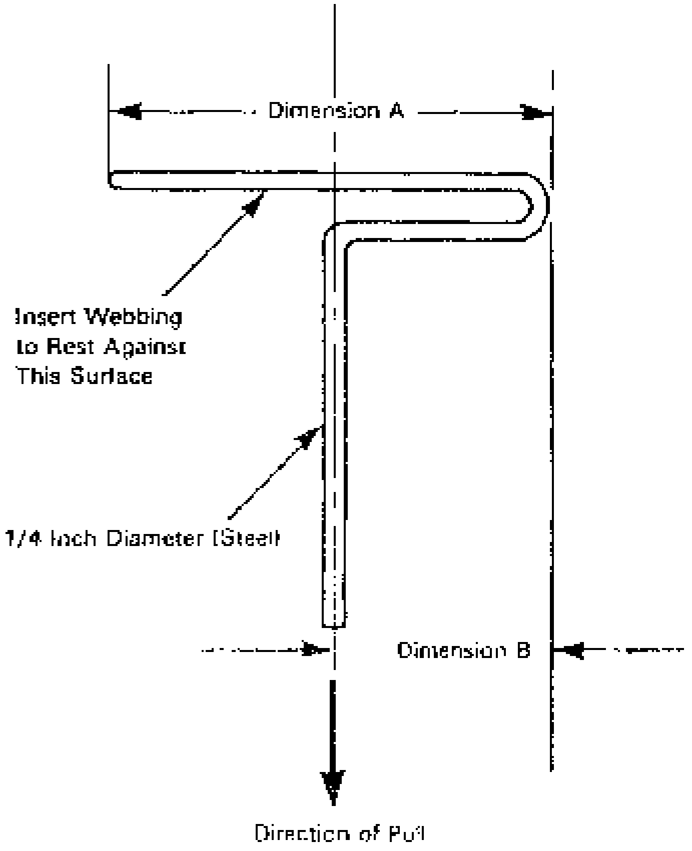
_X_ 14. Subtract the measurement in 13 from the measurement in 12. Is the difference 2 inches or less? (S7.1.1.5(c)(7)) 13-12= __0.2__ inches;

_X_ Yes-Pass; _ **No-FAIL**

_X_ 15. Subtract the measurement in 9 from the measurement in 13. Is the difference 3 inches or more? (S7.1.1.5(c)(8)) 9-13= 25.2 inches;

_X Yes-Pass; **No-FAIL**

REMARKS:


Dimension A
Insert Webbing to Rest Against This Surface
1/4 Inch Diameter (Steel)
Dimension B
Direction of Pull

Dimension A - Width of Webbing Plus 1/2 Inch

Dimension B - 1/2 of Dimension A

Figure 5. - Webbing Tension Pull Device

DATA SHEET 8
LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), and that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Third Row Center

___ N/A – No retractor is at this position

___ N/A – The retractor is an automatic locking retractor ONLY

X 1. Record test fore-aft seat position. Fixed ___ (S7.1.1.5 (c)(1)) (Any position is acceptable.)

X 2. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))
 X Yes-Pass; ___ **No-FAIL**

X 3. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))
 X Yes-Pass; ___ **No-FAIL**

X 4. Buckle the seat belt. (S7.1.1.5(c)(1))

X 5. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

X 6. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

X 7. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
 ___ Yes; X No (If yes, go to 7.1. If no, go to 8.)

___ 7.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))
 ___ Yes-Pass; ___ **No-FAIL**

X 8. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

X 9. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
 Measured distance between A and B 32.3 inches

X 10. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

_X_11. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle __10°_________ (spec. 5 - 15 degrees)

_X_12. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B__19.9__________ inches

_X_13. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate __25________ lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))

Measured distance between A and B _20.1__ inches (S7.1.1.5(c)(6))

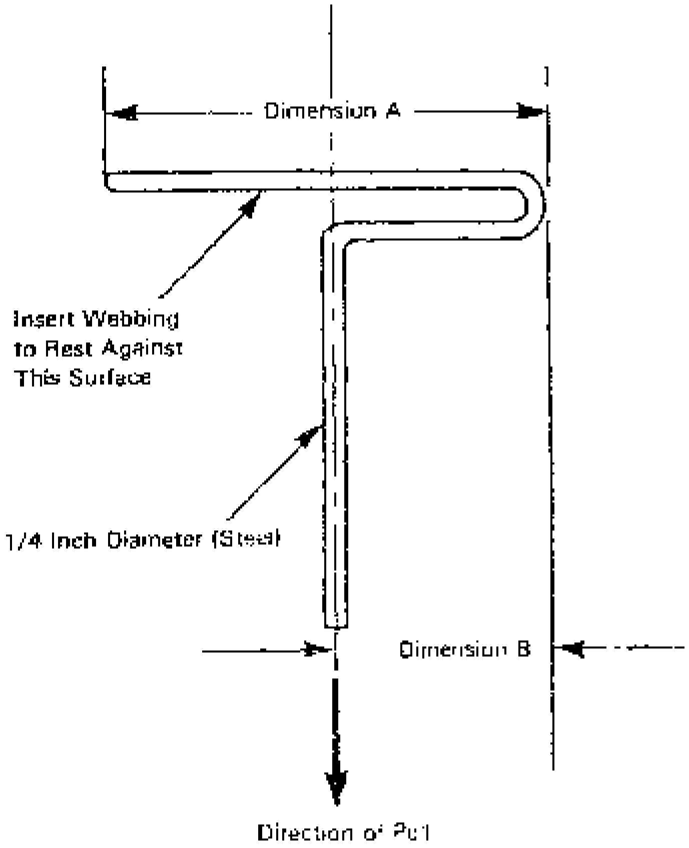
_X_14. Subtract the measurement in 13 from the measurement in 12. Is the difference 2 inches or less? (S7.1.1.5(c)(7)) 13-12= _0.2_ inches;

X_ Yes-Pass; ___ **No-FAIL**

_X_15. Subtract the measurement in 9 from the measurement in 13. Is the difference 3 inches or more? (S7.1.1.5(c)(8)) 9-13 _12.2__ inches;

_X_ Yes-Pass; _ **No-FAIL**

REMARKS:


Dimension A
Insert Webbing to Rest Against This Surface
1/4 Inch Diameter (Steel)
Dimension B
Direction of Pull

Dimension A - Width of Webbing Plus 1/2 Inch

Dimension B - 1/2 of Dimension A

Figure 5. - Webbing Tension Pull Device

DATA SHEET 8
LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger
vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for each designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Third Row Right

___ N/A - No retractor is at this position
___ N/A - The retractor is an automatic locking retractor ONLY

_X_ 1. Record test fore-aft seat position. Fixed (S7.1.1.5 (c)(1))
(Any position is acceptable.)

_X_ 2. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))
_X_ Yes-Pass; ___ **No-FAIL**

_X_ 3. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))
_X_ Yes-Pass; ___ **No-FAIL**

_X_ 4. Buckle the seat belt. (S7.1.1.5(c)(1))

_X_ 5. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

_X_ 6. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

_X_ 7. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
___ Yes; _X_ No (If yes, go to 7.1. If no, go to 8.)

___ 7.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))
___ Yes-Pass; ___ **No-FAIL**

_X_ 8. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

_X_ 9. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
Measured distance between A and B 40.2 inches

_X_ 10. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

_X_ 11. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle __10°______ (spec. 5 - 15 degrees)

X 12. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B __14.8______ inches

_X_ 13. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate __25______ lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))

Measured distance between A and B __15.2______ inches (S7.1.1.5(c)(6))

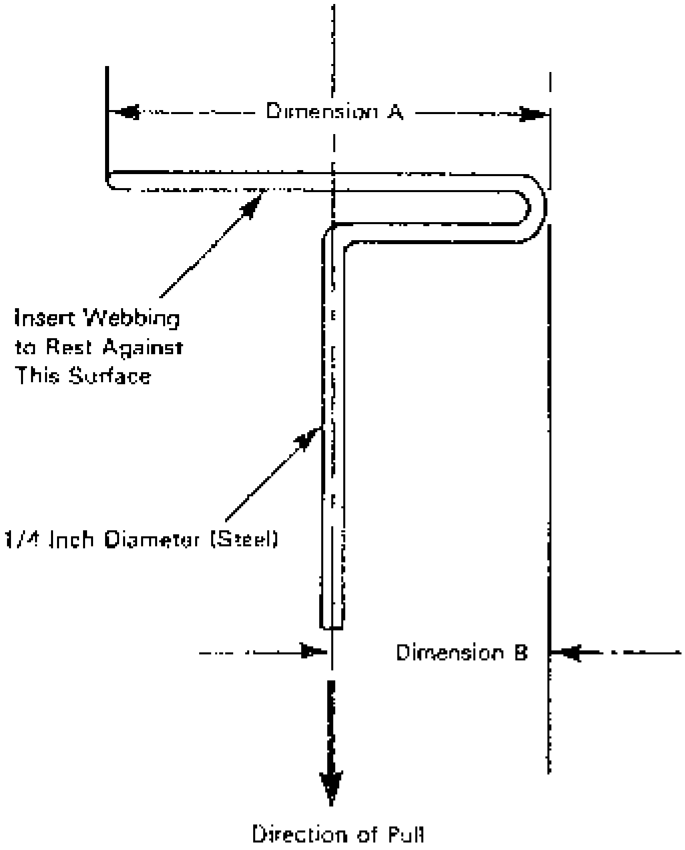
X 14. Subtract the measurement in 13 from the measurement in 12. Is the difference 2 inches or less? (S7.1.1.5(c)(7)) 13-12= __0.4__ inches;

_X_ Yes-Pass; ___ **No-FAIL**

_X_ 15. Subtract the measurement in 9 from the measurement in 13. Is the difference 3 inches or more? (S7.1.1.5(c)(8)) 9-13= _25.0__ inches;

_X_ Yes-Pass; ___ **No-FAIL**

REMARKS:


Dimension A
Insert Webbing to Rest Against This Surface
1/4 Inch Diameter (Steel)
Dimension B
Direction of Pull

Dimension A - Width of Webbing Plus 1/2 Inch

Dimension B - 1/2 of Dimension A

Figure 5. - Webbing Tension Pull Device

DATA SHEET 9

FMVSS 208 SEAT BELT WARNING SYSTEM CHECK (S7.3)

NHTSA No.: C35306 Test Date: 06/06/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

X 1. The occupant is in the driver's seat.
X 2. The seat belt is in the stowed position.
X 3. The key is in the "on" or "start" position.
X 4. The time duration of the audible signal beginning with key "on" or "start" is 6 seconds.
X 5. The occupant is in the driver's seat.
X 6. The seat belt is in the stowed position.
X 7. The key is in the "on" or "start"" position.
X 8. The time duration of the warning light beginning with key "on" or "start" is 60 seconds.
X 9. The occupant is in the driver's seat.
X 10. The seat belt is in the latched position and with at least 4 inches of belt webbing extended.
X 11. The key is in the "on" or "start" position.
X 12. The time duration of the audible signal beginning with key "on" or "start" is 0 seconds.
X 13. The occupant is in the driver's seat.
X 14. The seat belt is in the latched position and with at least 4 inches of belt webbing extended.
X 15. The key is in the "on" or "start" position.
X 16. The time duration of the warning light beginning with key "on" or "start" is 0 seconds.
X 17. Complete the following table with the data from 4, 8, 12 and 16 to determine which option is used

		Warning light	Warning light specification	Audible signal	Audible signal specification*
S7.3 (a)(1)	Belt latched & Key on or start	Item 16 0	0 seconds*	Item 12 0	0 seconds**
	Belt stowed & Key on or start	Item 8 60	60 seconds minimum	Item 4 6	4 to 8 seconds
S7.3 (a)(2)	Belt latched & Key on or start	Item 16	4 to 8 seconds	Item 12 ____	0 seconds**
	Belt stowed & Key on or start	Item 8 ____	4 to 8 seconds	Item 4 ____	4 to 8 seconds

* 49 USCS @ 30124 does NOT allow an audible signal to operate for more than 8 seconds.

** 0 seconds means the light or audible signal are NOT permitted to operate under these conditions. See 7/12/00 interpretation to Patrick Raher of Hogan and Hartson

_X_ 18. The seat belt warning system meets the requirements of (manufacturers may comply with either section)

- _X_ S7.3 (a)(1)
- _____ S7.3 (a)(2)
- _____ **FAIL** - Does NOT meet the requirements of either option

_X_ 19. Note wording of visual warning: (S7.3(a)(1) and S7.3(a)(2))

- _____ Fasten Seat Belts
- _____ Fasten Belts
- _X_ Symbol 101
- _____ **FAIL** Does not use any of the above wording or symbol

DATA SHEET 10
BELT CONTACT FORCE (S7.4.3)

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Front Row Left

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

X 1. Does the vehicle incorporate a webbing tension-relieving device?
  ___ Yes (this form is complete)
  X No (continue with this check sheet)

X 3. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
  ___ N/A No lumbar adjustment

X 4. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
  ___ N/A – No additional support adjustment

X 5. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S16.2.10.3.1)
  X N/A – No independent fore-aft seat cushion adjustment

X 6. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position. (S16.2.10.3.1)
  ___ N/A – No independent seat cushion height adjustment.

X 7. Put the seat in its full rearward position. (S16.2.10.3.1)
  ___ N/A - the seat does not have a fore-aft adjustment

X 8. If the seat height is adjustable, put it in the full down position. (S16.2.10.3.1)
  ___ N/A - No seat height adjustment

X 9. Draw a horizontal reference line on the side of the seat cushion.

X 10. Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
  ___ N/A - The seat does not have a fore-aft adjustment.

X 11. Using only the controls that change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the middle fore-aft position for this test. (S8.1.2)
  X Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: ___

X 12. If seat adjustments other than fore-aft are present and the horizontal reference line is no longer horizontal, use those adjustments to maintain the reference line as closely as possible to the horizontal. (S16.2.10.3.2.1)
  ___ N/A No adjustments
  Reference line angle as tested 0°

_X_ 13. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50^{th} percentile adult male in the manner specified by the manufacturer. (S4.5.4.1 (b) and S8.1.3)

___ N/A – No adjustments

Manufacturer's design seat back angle	distance between outer bolt for sun visor bracket and outer hole for head restraint equals 715 mm
Tested seat back angle	distance between outer bolt for sun visor bracket and outer hole for head restraint equals 715 mm

_X_ 14. Position the test dummies according to dummy position placement instructions in Appendix B and include the positioning check sheets.

_X_ 15. Fasten the seat belt latch.

_X_ 16. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

_X_ 17. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

Contact force 0.47______ lb.

_X_ 0.0 to 0.7 pounds - Pass

___ **greater than 0.7 pounds - FAIL**

DATA SHEET 10

BELT CONTACT FORCE (S7.4.3)

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Front Row Right

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

X 1. Does the vehicle incorporate a webbing tension-relieving device?
  ___ Yes (this form is complete)
  X No (continue with this check sheet)
X 3. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
  X N/A No lumbar adjustment
X 4. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
  X N/A No additional support adjustment
X 5. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S16.2.10.3.1)
  X N/A – No independent fore-aft seat cushion adjustment
X 6. If the seat cushion height adjusts independent of the seat back, set this adjusment to the full down position. (S16.2.10.3.1)
  X N/A – No independent seat cushion height adjustment.
X 7. Put the seat in its full rearward position. (S16.2.10.3.1)
  ___ N/A - the seat does not have a fore-aft adjustment
X 8. If the seat height is adjustable, put it in the full down position. (S16.2.10.3.1)
  ___ N/A - No seat height adjustment
X 9. Draw a horizontal reference line on the side of the seat cushion.
X 10. Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
  ___ N/A - The seat does not have a fore-aft adjustment.
X 11. Using only the controls that change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the middle fore-aft position for this test. (S8.1.2)
  X Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: ___
X 12. If seat adjustments other than fore-aft are present and the horizontal reference line is no longer horizontal, use those adjustments to maintain the reference line as closely as possible to the horizontal. (S16.2.10.3.2.1)
  X N/A – No adjustments
  Reference line angle as tested 0°

_X_ 13. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S4.5.4.1 (b) and S8.1.3)

___ N/A – No adjustments

Manufacturer's design seat back angle _5 detents reward from first locking position____

Tested seat back angle _5 detents reward from first locking position____

_X 14. Position the test dummies according to dummy position placement instructions in Appendix B and include the positioning check sheets.

_X 15. Fasten the seat belt latch.

_X_ 16. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

_X_ 17. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

Contact force _0.48_____ lb.

_X_ 0.0 to 0.7 pounds - **Pass**

_ **greater than 0.7 pounds - FAIL**

DATA SHEET 10
BELT CONTACT FORCE (S7.4.3)

NHTSA No.: C35306 ________ Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Second Row Left ________

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

_X_ 1. Does the vehicle incorporate a webbing tension-relieving device?
    ___ Yes (this form is complete)
    _X_ No (continue with this check sheet)

_X_ 3. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
    _X_ N/A – No lumbar adjustment

_X_ 4. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
    _X_ N/A – No additional support adjustment

_X_ 5. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S16.2.10.3.1)
    _X_ N/A No independent fore-aft seat cushion adjustment

_X_ 6. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position. (S16.2.10.3.1)
    ___ N/A – No independent seat cushion height adjustment.

_X_ 7. Put the seat in its full rearward position. (S16.2.10.3.1)
    ___ N/A - the seat does not have a fore-aft adjustment

_X_ 8. If the seat height is adjustable, put it in the full down position. (S16.2.10.3.1)
    _X_ N/A – No seat height adjustment

_X_ 9. Draw a horizontal reference line on the side of the seat cushion.

_X_ 10. Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
    N/A - The seat does not have a fore-aft adjustment.

_X_ 11. Using only the controls that change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the middle fore-aft position for this test. (S8.1.2)
    _X_ Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: ________

_X_ 12. If seat adjustments other than fore-aft are present and the horizontal reference line is no longer horizontal, use those adjustments to maintain the reference line as closely as possible to the horizontal. (S16.2.10.3.2.1)
    _ N/A – No adjustments
    Reference line angle as tested _0° ________

_X_ 13. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S4.5.4.1 (b) and S8.1.3)

___ N/A – No adjustments

Manufacturer's design seat back angle _5 detents reward from first locking position

Tested seat back angle _5 detents reward from first locking position

_X_ 14. Position the test dummies according to dummy position placement instructions in Appendix B and include the positioning check sheets.

_X_ 15. Fasten the seat belt latch.

_X_ 16. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

_X_ 17. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

Contact force _0.51_____ lb.

_X_ 0.0 to 0.7 pounds - Pass

___ **greater than 0.7 pounds - FAIL**

DATA SHEET 10
BELT CONTACT FORCE (S7.4.3)

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Second Row Right

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

X 1. Does the vehicle incorporate a webbing tension-relieving device?
  ___ Yes (this form is complete)
  X No (continue with this check sheet)

X 3. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
  X N/A – No lumbar adjustment

X 4. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
  X N/A No additional support adjustment

X 5. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S16.2.10.3.1)
  X N/A – No independent fore-aft seat cushion adjustment

X 6. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position. (S16.2.10.3.1)
  X N/A – No independent seat cushion height adjustment.

X 7. Put the seat in its full rearward position. (S16.2.10.3.1)
  ___ N/A - the seat does not have a fore-aft adjustment

X 8. If the seat height is adjustable, put it in the full down position. (S16.2.10.3.1)
  X N/A No seat height adjustment

X 9. Draw a horizontal reference line on the side of the seat cushion.

X 10. Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
  ___ N/A - The seat does not have a fore-aft adjustment.

X 11. Using only the controls that change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the middle fore-aft position for this test. (S8.1.2)
  X Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: ___

X 12. If seat adjustments other than fore-aft are present and the horizontal reference line is no longer horizontal, use those adjustments to maintain the reference line as closely as possible to the horizontal. (S16.2.10.3.2.1)
  ___ N/A No adjustments
  Reference line angle as tested 0°

X 13. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S4.5.4.1 (b) and S8.1.3)

N/A No adjustments

Manufacturer's design seat back angle _5 detents reward from first locking position_

Tested seat back angle _5 detents reward from first locking position_

_X_ 14. Position the test dummies according to dummy position placement instructions in Appendix B and include the positioning check sheets.

_X_ 15. Fasten the seat belt latch.

_X_ 16. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

_X_ 17. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

Contact force _0.52_ lb.

_X_ 0.0 to 0.7 pounds - Pass

___ **greater than 0.7 pounds - FAIL**

DATA SHEET 10
BELT CONTACT FORCE (S7.4.3)

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Third Row Left

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

X 1. Does the vehicle incorporate a webbing tension-relieving device?
 ___ Yes (this form is complete)
 X No (continue with this check sheet)

X 3. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
 X N/A – No lumbar adjustment

X 4. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
 X N/A -- No additional support adjustment

X 5. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S16.2.10.3.1)
 X N/A -- No independent fore-aft seat cushion adjustment

X 6. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position. (S16.2.10.3.1)
 X N/A – No independent seat cushion height adjustment.

X 7. Put the seat in its full rearward position. (S16.2.10.3.1)
 X N/A - the seat does not have a fore-aft adjustment

X 8. If the seat height is adjustable, put it in the full down position. (S16.2.10.3.1)
 X N/A No seat height adjustment

X 9. Draw a horizontal reference line on the side of the seat cushion.

X 10. Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
 X N/A - The seat does not have a fore-aft adjustment.

X 11. Using only the controls that change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the middle fore-aft position for this test. (S8.1.2)
 Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: Fixed

X 12. If seat adjustments other than fore-aft are present and the horizontal reference line is no longer horizontal, use those adjustments to maintain the reference line as closely as possible to the horizontal. (S16.2.10.3.2.1)
 X N/A – No adjustments
 Reference line angle as tested 0°

_X_ 13. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S4.5.4.1 (b) and S8.1.3)

_X_ N/A – No adjustments

Manufacturer's design seat back angle _N/A_____

Tested seat back angle ___N/A________

_X_ 14. Position the test dummies according to dummy position placement instructions in Appendix B and include the positioning check sheets.

_X_ 15. Fasten the seat belt latch.

_X_ 16. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

_X_ 17. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

Contact force 0.52 lb.

_X 0.0 to 0.7 pounds - Pass

_ **greater than 0.7 pounds - FAIL**

DATA SHEET 10
BELT CONTACT FORCE (S7.4.3)

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Third Row Center

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

X 1. Does the vehicle incorporate a webbing tension-relieving device?
 __ Yes (this form is complete)
 X No (continue with this check sheet)

X 3. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
 X N/A - No lumbar adjustment

X 4. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
 X N/A – No additional support adjustment

X 5. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S16.2.10.3.1)
 X N/A – No independent fore-aft seat cushion adjustment

X 6. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position. (S16.2.10.3.1)
 X N/A – No independent seat cushion height adjustment.

X 7. Put the seat in its full rearward position. (S16.2.10.3.1)
 X N/A - the seat does not have a fore-aft adjustment

X 8. If the seat height is adjustable, put it in the full down position. (S16.2.10.3.1)
 X N/A – No seat height adjustment

X 9 Draw a horizontal reference line on the side of the seat cushion.

X 10. Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
 X N/A - The seat does not have a fore-aft adjustment.

X 11. Using only the controls that change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the middle fore-aft position for this test. (S8.1.2)
 __ Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: Fixed

X 12. If seat adjustments other than fore-aft are present and the horizontal reference line is no longer horizontal, use those adjustments to maintain the reference line as closely as possible to the horizontal. (S16.2.10.3.2.1)
 X N/A No adjustments
 Reference line angle as tested 0°

_X_ 13. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S4.5.4.1 (b) and S8.1.3)

_X_ N/A – No adjustments

Manufacturer's design seat back angle N/A____

Tested seat back angle ___N/A ____

_X_ 14. Position the test dummies according to dummy position placement instructions in Appendix B and include the positioning check sheets.

_X_ 15. Fasten the seat belt latch.

_X_ 16. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

X_ 17. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

Contact force _0.53_____ lb.

_X_ 0.0 to 0.7 pounds - Pass

___ **greater than 0.7 pounds - FAIL**

DATA SHEET 10
BELT CONTACT FORCE (S7.4.3)

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Third Row Right

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

X 1. Does the vehicle incorporate a webbing tension-relieving device?
 ___ Yes (this form is complete)
 X No (continue with this check sheet)
X 3. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
 X N/A – No lumbar adjustment
X 4. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
 X N/A – No additional support adjustment
X 5. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S16.2.10.3.1)
 X N/A – No independent fore-aft seat cushion adjustment
X 6. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position. (S16.2.10.3.1)
 N/A – No independent seat cushion height adjustment.
X 7. Put the seat in its full rearward position. (S16.2.10.3.1)
 X N/A - the seat does not have a fore-aft adjustment
X 8. If the seat height is adjustable, put it in the full down position. (S16.2.10.3.1)
 X N/A – No seat height adjustment
X 9. Draw a horizontal reference line on the side of the seat cushion.
X 10. Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
 X N/A - The seat does not have a fore-aft adjustment.
X 11. Using only the controls that change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the middle fore-aft position for this test. (S8.1.2)
 __ Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: Fixed
X 12. If seat adjustments other than fore-aft are present and the horizontal reference line is no longer horizontal, use those adjustments to maintain the reference line as closely as possible to the horizontal. (S16.2.10.3.2.1)
 N/A No adjustments
 Reference line angle as tested 0°

X 13. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S4.5.4.1 (b) and S8.1.3)

X N/A No adjustments

Manufacturer's design seat back angle N/A

Tested seat back angle N/A

X 14. Position the test dummies according to dummy position placement instructions in Appendix B and include the positioning check sheets.

X 15. Fasten the seat belt latch.

X 16. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

X 17. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

Contact force 0.52 lb.

X 0.0 to 0.7 pounds – Pass

____ greater than 0.7 pounds – FAIL

DATA SHEET 11
LATCHPLATE ACCESS (S7.4.4)

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Left Front

Test all front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

_X_ 1. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (8.1.3)
  _X_ N/A No lumbar adjustment

_X_ 2. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
  _X_ N/A – No additional support adjustment

_X_ 3. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S16.2.10.3.1)
  _X_ N/A – No independent fore-aft seat cushion adjustment

_X_ 4. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position. (S16.2.10.3.1)
  _X_ N/A – No independent seat cushion height adjustment.

_X_ 5. Put the seat in its full rearward position. (S16.2.10.3.1)
  ___ N/A - the seat does not have a fore-aft adjustment

_X_ 6. If the seat height is adjustable, put it in the full down position. (S16.2.10.3.1)
  ___ N/A No seat height adjustment

_X_ 7 Draw a horizontal reference line on the side of the seat cushion

_X_ 8. Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid-position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
  ___ N/A - The seat does not have a fore-aft adjustment.

_X_ 9. Using only the controls that change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the forwardmost fore-aft position for this test. (S10.7)

_X_ 10. If seat adjustments, other than fore-aft, are present and the horizontal reference line is no longer horizontal, use those adjustments to maintain the reference line as closely as possible to the horizontal.
  ___ N/A – No adjustments
  Reference line angle as tested 0°

X 11. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S4.5.4.1 (b) and S8.1.3)

___ N/A – No seat back angle adjustment

Manufacturer's design seat back angle distance between outer bolt for sun visor bracket and outer hole for head restraint equals 715 mm

Tested seat back angle distance between outer bolt for sun visor bracket and outer hole for head restraint equals 715 mm

X 12. Position the test dummy using the procedures in Appendix A. (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position. Note on the Appendix A positioning check sheet any deviations necessary to position the Part 572, Subpart E dummy.) Include the positioning check sheet with this form.

X 13. Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50th percentile adult male occupant.

X 14. Attach the inboard reach string to the base of the head following the instructions on Figure 3.

X 15. Attach the outboard reach string to the torso sheath following the instructions on Figure 3.

X 16. Place the latch plate in the stowed position.

X 17. Extend inboard reach string in front of the dummy and then backward and outboard to the latch plate to generate an arc of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?

X Yes-Pass; ___ **No**

X 18. Extend outboard reach string in front of the dummy and then backward and outboard to the latch plate to generate an arc of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?

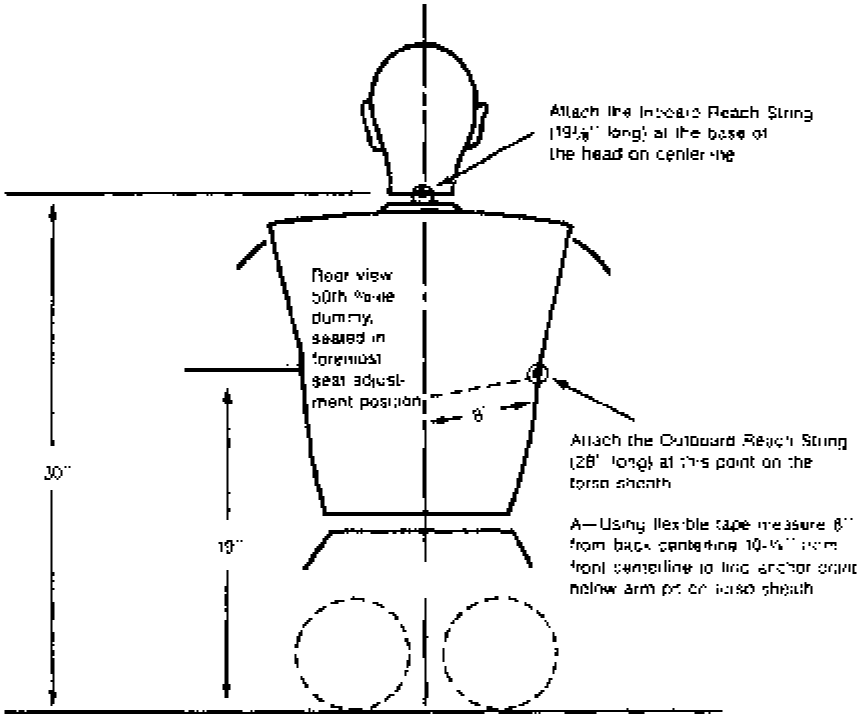
X Yes-Pass; ___ **No**

X 19. Is the latch plate within the inboard (item 17) or outboard (item 18) reach envelope?

X Yes-Pass; ___ **No-FAIL**

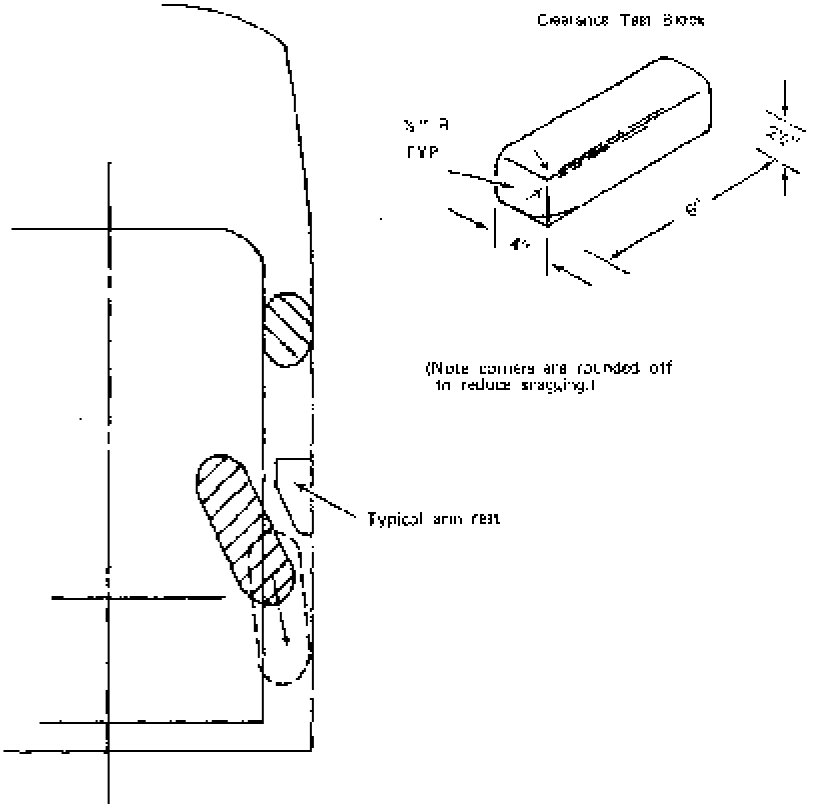
X 20. Using the clearance test block, specified in Figure 4, is there sufficient clearance between the vehicle seat and the side of vehicle interior to allow the test block to move unhindered to the latch plate or buckle?

X Yes-Pass; ___ **No-FAIL**


Attach the Inboard Reach String (19¾" long) at the base of the head on centerline
Rear view 50th %ile dummy, seated in foremost seat adjust- ment position
8"
30"
19"
Attach the Outboard Reach String (28" long) at this point on the torso sheath
A—Using flexible tape measure 8" from back centerline 10-¾" from front centerline to find anchor point below arm pit on torso sheath

Seat Plane is 90° to the Torso Line

Figure 3. Location of Anchoring Points for Latchplate Reach Limiting Chains or Strings to Test for Latchplate Accessibility Using Subpart B Test Device



(Note corners are rounded off to reduce snagging.)

Figure 4 - USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS

DATA SHEET 11
LATCHPLATE ACCESS (S7.4.4)

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Right Front

Test all front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

_X_ 1. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (8.1.3)
  _X_ N/A – No lumbar adjustment

_X_ 2. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
  _X_ N/A - No additional support adjustment

_X_ 3. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S16.2.10.3.1)
  _X_ N/A - No independent fore-aft seat cushion adjustment

_X_ 4. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position. (S16.2.10.3.1)
  _X_ N/A - No independent seat cushion height adjustment.

_X_ 5. Put the seat in its full rearward position. (S16.2.10.3.1)
  ___ N/A - the seat does not have a fore-aft adjustment

_X_ 6. If the seat height is adjustable, put it in the full down position. (S16.2.10.3.1)
  X N/A -- No seat height adjustment

_X_ 7 Draw a horizontal reference line on the side of the seat cushion

_X_ 8. Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid-position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
  ___ N/A - The seat does not have a fore-aft adjustment.

_X_ 9. Using only the controls that change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the forwardmost fore-aft position for this test. (S10.7)

_X_ 10. If seat adjustments, other than fore-aft, are present and the horizontal reference line is no longer horizontal, use those adjustments to maintain the reference line as closely as possible to the horizontal.
  ___ N/A -- No adjustments
  Reference line angle as tested 0°

_X_ 11. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S4.5.4.1 (b) and S8.1.3)

___ N/A – No seat back angle adjustment

Manufacturer's design seat back angle _5 detents reward from first locking position

Tested seat back angle _5 detents reward from first locking position

_X_ 12. Position the test dummy using the procedures in Appendix A. (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position. Note on the Appendix A positioning check sheet any deviations necessary to position the Part 572, Subpart E dummy.) Include the positioning check sheet with this form.

_X_ 13. Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50th percentile adult male occupant.

_X_ 14. Attach the inboard reach string to the base of the head following the instructions on Figure 3.

_X_ 15. Attach the outboard reach string to the torso sheath following the instructions on Figure 3.

_X_ 16. Place the latch plate in the stowed position.

_X_ 17. Extend inboard reach string in front of the dummy and then backward and outboard to the latch plate to generate an arc of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?

_X_ Yes-Pass; ___ **No**

_X_ 18. Extend outboard reach string in front of the dummy and then backward and outboard to the latch plate to generate an arc of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?

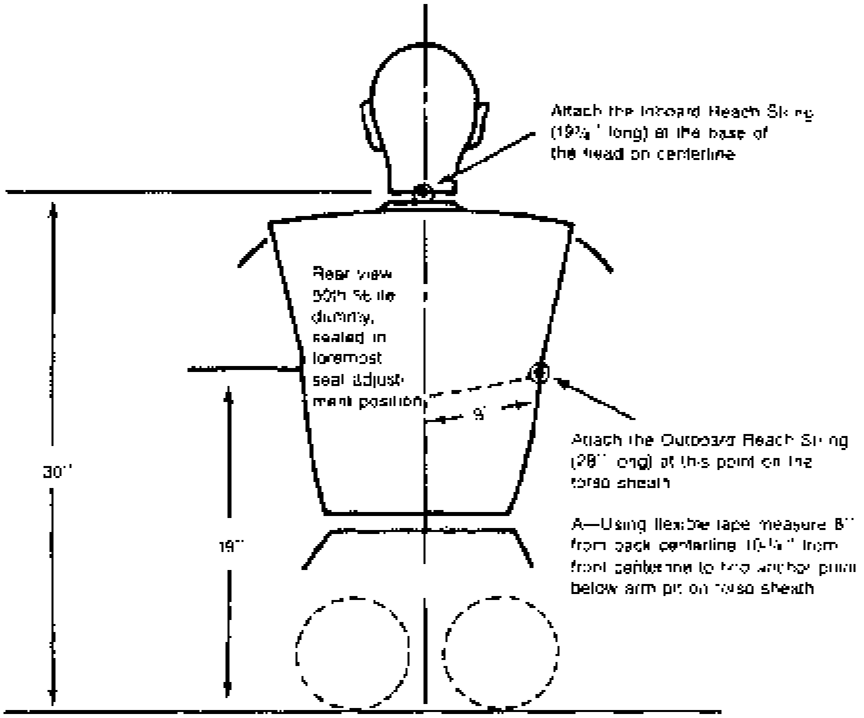
_X_ Yes-Pass; _ **No**

_X_ 19. Is the latch plate within the inboard (item 17) or outboard (item 18) reach envelope?

_X_ Yes-Pass; ___ **No-FAIL**

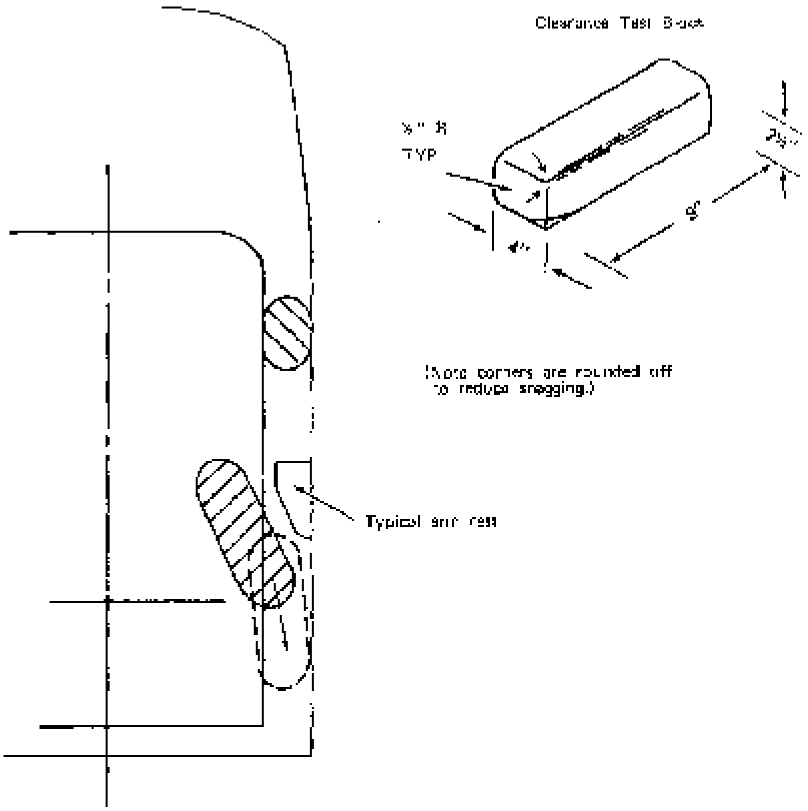
_X_ 20. Using the clearance test block, specified in Figure 4, is there sufficient clearance between the vehicle seat and the side of vehicle interior to allow the test block to move unhindered to the latch plate or buckle?

_X_ Yes-Pass; ___ **No-FAIL**


Attach the Inboard Reach String (19¾" long) at the base of the head on centerline
Rear view 50th %ile dummy, seated in foremost seat adjustment position
9"
Attach the Outboard Reach String (28" long) at this point on the torso sheath
A—Using flexible tape measure 9" from back centerline 10¾" from front centerline to the anchor point below arm pit on torso sheath
30"
19"

Seat Plane is 90° to the Torso Line

Figure 3. Location of Anchoring Points for Latchplate Reach Limiting Chains or Strings to Test for Latchplate Accessibility Using Subpart E Test Device



(Note corners are rounded off to reduce snagging.)

Figure 4—USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS

DATA SHEET 12
SEAT BELT RETRACTION (S7.4.5)

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Left Front

GVWR: 2569.6 kg/5665 lbs.

Test all front outboard seat belts, except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

_X_ 1. Is the vehicle a passenger car or walk-in van-type vehicle?
 ___ Yes, this form is complete
 _X_ No
_X_ 2. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
 ___ N/A – No lumbar adjustment
_X_ 3. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
 _X_ N/A – No additional support adjustment
_X_ 4. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position.) (S16.2.10.3.1)
 _X_ N/A – No independent fore-aft seat cushion adjustment
_X_ 5. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position. (S16.2.10.3.1)
 _X_ N/A – No independent seat cushion height adjustment.
_X_ 6. Put the seat in its full rearward position.
 ___ N/A - the seat does not have a fore-aft adjustment
_X_ 7. If the seat height is adjustable, put it in the full down position. (S8.1.2)
 ___ N/A – No seat height adjustment
_X_ 7 Draw a horizontal line on the side of the seat cushion.
_X_ 8. Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
 ___ N/A – The seat does not have a fore-aft adjustment.
_X_ 9. Using only the controls that change the seat in the fore-aft direction, place the seat in the middle fore-aft position. (S8.1.2)
 If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: ___
_X_ 10. If seat adjustments, other than fore-aft, are present and the reference line is no longer horizontal, use those adjustments to maintain the reference line as closely as possible to the horizontal. (S16.2.10.3.2)
 ___ N/A – No seat adjustments
 Reference angle as tested 0°

X 11. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S8.1.3)

___ N/A – No seat back angle adjustment

Manufacturer's design seat back angle distance between outer bolt for sun visor bracket and outer hole for head restraint equals 715 mm

Tested seat back angle distance between outer bolt for sun visor bracket and outer hole for head restraint equals 715 mm

X 12. If adjustable, set the head restraint at the full up and full forward position. (S8.1.3) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.

___ N/A – No head restraint adjustment

X 13. Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S8.1.3)

___ N/A – No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position. Highest

Tested anchorage position Highest

X 14. Is the driver seat a bucket seat?

X Yes, go to 14.1 and skip 14.2.

___ No, go to 14.2 and skip 14.1.

X 14.1 Bucket seats:

Locate and mark a vertical Plane B through the longitudinal centerline of the seat. The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.

Record the width of the seat. 540 mm

Record the distance from the edge of the seat to Plane B. 270 mm

___ 14.2 Bench seats (including split bench seats):

___ Driver seat: Locate and mark a vertical Plane B through the center of the steering wheel parallel to the vehicle longitudinal centerline.

___ Passenger seat: Locate and mark a vertical longitudinal Plane B on the seat that is the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel.

Distance from the vehicle centerline to the center of the steering wheel ___

Distance from the vehicle centerline to Plane B ___

X 15. Stow outboard armrests that are capable of being stowed. (S7.4.5)

X 16. Remove the arms of a Subpart E dummy and place it in the seat such that the midsagittal plane is coincident with Plane B and the upper torso rests against the seat back. (S10.4.1.1 & S10.4.1.2)

X 17. Rest the thighs on the seat cushion.

X 18. Position the H-point of the dummy within 0.5 inch of the vertical dimension and 0.5 inch of the horizontal dimension of a point 0.25 inch below the H-point determined by using the equipment and procedures specified in SAE J826 (APR 1980). (S10.4.2.1) Then measure the pelvic angle with respect to the horizontal using the pelvic angle gage. Adjust the dummy position until these three measurements are within the specifications. (S10.4.2.1 and S10.4.2.2)

.25 horizontal inches from the point 0.25 below the determined H-point (0.5 inch max.) (S10.4.2.1)

.25 vertical inches from the point 0.25 below the determined H-point (0.5 inch max.) (S10.4.2.1)

22.0° pelvic angle (20° to 25°)

X 19. Set the distance between the outboard knee clevis flange surfaces at 10.6 inches.

X measured distance (10.6 inches) (S10.5)

X 20. To the extent practicable keep the thighs and the legs in a vertical plane (S10.5) and rest the thighs on the seat cushion while resting the feet on the floorpan or toe board.

_X_ 21. Fasten the seat belt around the dummy.
_X_ 22. Remove all slack from the lap belt portion. (S10.9)
_X_ 23. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times. (S10.9)
_X_ 24. Apply a 2 to 4 pound tension load to the lap belt. (S10.9)
    _4_ pound load applied
_X_ 25. Is the belt system equipped with a tension relieving device?
    ___ Yes, continue
    _X_ No, go to 26
___ 25.1 Introduce the maximum amount of slack into the upper torso belt that is recommended by the vehicle manufacturer in the vehicle owner's manual. (S10.9).
_X_ 26. Check the statement that applies to this test vehicle:
___ 26.1 The torso and lap belt webbing of the seat belt system automatically retracts to a stowed position when the adjacent vehicle door is in an open position and the seat belt latch plate is released. ____ Pass
_X_ 26.2 The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latch plate is released. _X_ Pass
___ 26.3 Neither A or B apply. ____ **FAIL**
_X_ 27. With the webbing and hardware in the stowed position are the webbing and hardware prevented from being pinched when the door is closed?
    _X_ Yes-Pass; ___ **No-FAIL**
_X_ 28. If this test vehicle has an open body (without doors) and has a belt system with a tension-relieving device, does the belt system fully retract when the tension-relieving device is deactivated?
    _X_ N/A
    ___ Yes-Pass; ___ **No-FAIL**

DATA SHEET 12
SEAT BELT RETRACTION (S7.4.5)

NHTSA No.: C35306 Test Date: 06/09/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Right Front

GVWR: 2569.6 kg/5665 lbs.

Test all front outboard seat belts, except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

_X_ 1. Is the vehicle a passenger car or walk-in van-type vehicle?
  ___ Yes, this form is complete
  _X_ No

_X_ 2. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
  _X_ N/A – No lumbar adjustment

_X_ 3. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
  _X_ N/A No additional support adjustment

_X_ 4. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position.) (S16.2.10.3.1)
  _X_ N/A – No independent fore-aft seat cushion adjustment

_X_ 5. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position. (S16.2.10.3.1)
  _X_ N/A - No independent seat cushion height adjustment.

_X_ 6. Put the seat in its full rearward position.
  ___ N/A - the seat does not have a fore-aft adjustment

_X_ 7. If the seat height is adjustable, put it in the full down position. (S8.1.2)
  _X_ N/A – No seat height adjustment

_X_ 7 Draw a horizontal line on the side of the seat cushion.

_X_ 8. Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
  ___ N/A - The seat does not have a fore-aft adjustment.

_X_ 9. Using only the controls that change the seat in the fore-aft direction, place the seat in the middle fore-aft position. (S8.1.2)
  If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: ____________

_X_ 10. If seat adjustments, other than fore-aft, are present and the reference line is no longer horizontal, use those adjustments to maintain the reference line as closely as possible to the horizontal. (S16.2.10.3.2)
  _ N/A No seat adjustments
  Reference angle as tested 0°

_X_ 11. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S8.1.3)

_ _ N/A – No seat back angle adjustment

Manufacturer's design seat back angle 5 detents reward from first locking position

Tested seat back angle 5 detents reward from first locking position

_X_ 12. If adjustable, set the head restraint at the full up and full forward position. (S8.1.3) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.

___ N/A – No head restraint adjustment

_X_ 13. Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S8.1.3)

___ N/A – No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position. Highest

Tested anchorage position Highest

_X_ 14. Is the driver seat a bucket seat?

_X_ Yes, go to 14.1 and skip 14.2.

__ No, go to 14.2 and skip 14.1.

_X_ 14.1 Bucket seats:

Locate and mark a vertical Plane B through the longitudinal centerline of the seat. The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.

Record the width of the seat. 540 mm

Record the distance from the edge of the seat to Plane B. 270 mm

___ 14.2 Bench seats (including split bench seats):

__ Driver seat: Locate and mark a vertical Plane B through the center of the steering wheel parallel to the vehicle longitudinal centerline.

__ Passenger seat: Locate and mark a vertical longitudinal Plane B on the seat that is the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel.

Distance from the vehicle centerline to the center of the steering wheel ____________

Distance from the vehicle centerline to Plane B __ __ . __

_X_ 15. Stow outboard armrests that are capable of being stowed. (S7.4.5)

_X_ 16. Remove the arms of a Subpart E dummy and place it in the seat such that the midsagittal plane is coincident with Plane B and the upper torso rests against the seat back. (S10.4.1.1 & S10.4.1.2)

X 17. Rest the thighs on the seat cushion.

_X_ 18. Position the H-point of the dummy within 0.5 inch of the vertical dimension and 0.5 inch of the horizontal dimension of a point 0.25 inch below the H-point determined by using the equipment and procedures specified in SAE J826 (APR 1980). (S10.4.2.1) Then measure the pelvic angle with respect to the horizontal using the pelvic angle gage. Adjust the dummy position until these three measurements are within the specifications. (S10.4.2.1 and S10.4.2.2)

.25 horizontal inches from the point 0.25 below the determined H-point (0.5 inch max.) (S10.4.2.1)

.25 vertical inches from the point 0.25 below the determined H-point (0.5 inch max.) (S10.4.2.1)

22.0° pelvic angle (20° to 25°)

_X_ 19. Set the distance between the outboard knee clevis flange surfaces at 10.6 inches.

_X_ measured distance (10.6 inches) (S10.5)

_X_ 20. To the extent practicable keep the thighs and the legs in a vertical plane (S10.5) and rest the thighs on the seat cushion while resting the feet on the floorpan or toe board.

_X_ 21. Fasten the seat belt around the dummy.

_X_ 22. Remove all slack from the lap belt portion. (S10.9)

_X_ 23. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times. (S10.9)

_X_ 24. Apply a 2 to 4 pound tension load to the lap belt. (S10.9)

_4_ pound load applied

_X_ 25. Is the belt system equipped with a tension relieving device?

_ _ Yes, continue

_X_ No, go to 26

__ 25.1 Introduce the maximum amount of slack into the upper torso belt that is recommended by the vehicle manufacturer in the vehicle owner's manual. (S10.9).

_X_ 26. Check the statement that applies to this test vehicle:

___ 26.1 The torso and lap belt webbing of the seat belt system automatically retracts to a stowed position when the adjacent vehicle door is in an open position and the seat belt latch plate is released. ____ Pass

_X_ 26.2 The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latch plate is released _X_ Pass

___ 26.3 Neither A or B apply. ____ **FAIL**

_X_ 27. With the webbing and hardware in the stowed position are the webbing and hardware prevented from being pinched when the door is closed?

_X_ Yes-Pass; ___ **No-FAIL**

_X_ 28. If this test vehicle has an open body (without doors) and has a belt system with a tension-relieving device, does the belt system fully retract when the tension-relieving device is deactivated?

_X_ N/A

___ Yes-Pass; ___ **No-FAIL**

DATA SHEET 13
SEAT BELT GUIDES AND HARDWARE (S7.4.6)

NHTSA No.: C35306 Test Date: 06/06/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Left Front

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

_X_ 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
 ___ Yes; this form is complete
 _X_ No; go to 2

_X_ 2. Is the seat removable? (S7.4.6.1(b))
 ___ Yes; this form is complete
 _X_ No; go to 3

_X_ 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
 ___ Yes; this form is complete
 _X_ No; go to 4

_X_ 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
 ___ Yes: go to 5.
 _X_ No: this form is complete.

___ 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))
 ___ Yes-Pass; ___ **No-FAIL**
 Identify the part(s) on top or above the seat.
 ___ seat belt latch plate; ___ buckle; ___ seat belt webbing

___ 6. Are the remaining two seat belt parts accessible under normal conditions?
 ___ Yes-Pass; ___ **No-FAIL**

___ 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
 ___ Yes-Pass; ___ **No-FAIL**

___ 8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)
 ___ Yes-Pass; ___ **No-FAIL**

___ 9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
 ___ Yes-Pass; ___ **No-FAIL**

___ 10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
 ___ Yes-Pass; ___ **No-FAIL**

DATA SHEET 13
SEAT BELT GUIDES AND HARDWARE (S7.4.6)

NHTSA No.: C35306 Test Date: 06/06/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Right Front

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

X 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
- ___ Yes; this form is complete
- X No; go to 2

X 2. Is the seat removable? (S7.4.6.1(b))
- ___ Yes; this form is complete
- X No; go to 3

X 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
- ___ Yes; this form is complete
- X No; go to 4

X 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
- ___ Yes: go to 5.
- X No: this form is complete.

5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))
- ___ Yes-Pass; ___ **No-FAIL**

Identify the part(s) on top or above the seat.
- ___ seat belt latch plate; ___ buckle; ___ seat belt webbing

___ 6. Are the remaining two seat belt parts accessible under normal conditions?
- ___ Yes-Pass; ___ **No-FAIL**

___ 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
- ___ Yes-Pass; ___ **No-FAIL**

___ 8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)
- ___ Yes-Pass; ___ **No-FAIL**

9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
- ___ Yes-Pass; ___ **No-FAIL**

10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
- ___ Yes-Pass; ___ **No-FAIL**

DATA SHEET 13
SEAT BELT GUIDES AND HARDWARE (S7.4.6)

NHTSA No.: C35306 Test Date: 06/06/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Second Row Left

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

X 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
 ___ Yes; this form is complete
 X No; go to 2

X 2. Is the seat removable? (S7.4.6.1(b))
 X Yes; this form is complete
 ___ No; go to 3

___ 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
 ___ Yes; this form is complete
 ___ No; go to 4

___ 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
 ___ Yes; go to 5.
 ___ No; this form is complete.

___ 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))
 ___ Yes-Pass; ___ **No-FAIL**
 Identify the part(s) on top or above the seat.
 ___ seat belt latch plate; ___ buckle; ___ seat belt webbing

___ 6. Are the remaining two seat belt parts accessible under normal conditions?
 ___ Yes-Pass; ___ **No-FAIL**

___ 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
 ___ Yes-Pass; ___ **No-FAIL**

___ 8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)
 ___ Yes-Pass; ___ **No-FAIL**

___ 9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
 ___ Yes-Pass; ___ **No-FAIL**

___ 10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
 ___ Yes-Pass; ___ **No-FAIL**

DATA SHEET 13
SEAT BELT GUIDES AND HARDWARE (S7.4.6)

NHTSA No.: C35306 Test Date: 06/06/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Second Row Right

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

X 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
 ___ Yes; this form is complete
 X No; go to 2

X 2. Is the seat removable? (S7.4.6.1(b))
 X Yes; this form is complete
 ___ No; go to 3

___ 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
 ___ Yes; this form is complete
 ___ No; go to 4

___ 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
 ___ Yes; go to 5.
 ___ No; this form is complete.

___ 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))
 ___ Yes-Pass; ___ **No-FAIL**
 Identify the part(s) on top or above the seat.
 ___ seat belt latch plate; ___ buckle; ___ seat belt webbing

___ 6. Are the remaining two seat belt parts accessible under normal conditions?
 ___ Yes-Pass; ___ **No-FAIL**

___ 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
 ___ Yes-Pass; ___ **No-FAIL**

___ 8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)
 ___ Yes-Pass; ___ **No-FAIL**

___ 9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
 ___ Yes-Pass; ___ **No-FAIL**

___ 10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
 ___ Yes-Pass; ___ **No-FAIL**

DATA SHEET 13
SEAT BELT GUIDES AND HARDWARE (S7.4.6)

NHTSA No.: C35306 Test Date: 06/06/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Third Row Left

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

X 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
- X Yes; this form is complete
- ___ No; go to 2

___ 2. Is the seat removable? (S7.4.6.1(b))
- ___ Yes; this form is complete
- ___ No; go to 3

___ 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
- ___ Yes; this form is complete
- ___ No; go to 4

___ 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
- ___ Yes; go to 5.
- ___ No; this form is complete.

___ 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))
- ___ Yes-Pass; ___ **No-FAIL**

Identify the part(s) on top or above the seat.
- ___ seat belt latch plate; ___ buckle; ___ seat belt webbing

___ 6. Are the remaining two seat belt parts accessible under normal conditions?
- ___ Yes-Pass; ___ **No-FAIL**

___ 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
- ___ Yes-Pass; ___ **No-FAIL**

___ 8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)
- ___ Yes-Pass; ___ **No-FAIL**

___ 9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
- ___ Yes-Pass; ___ **No-FAIL**

___ 10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
- ___ Yes-Pass; ___ **No-FAIL**

DATA SHEET 13
SEAT BELT GUIDES AND HARDWARE (S7.4.6)

NHTSA No.: C35306___________ Test Date: 06/06/03____

Laboratory: TRC Inc.______ Test Technician(s): S. Bell____________________

DESIGNATED SEATING POSITION: Third Row Center____________________

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

_X_ 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
  _X_ Yes; this form is complete
  ___ No; go to 2

___ 2. Is the seat removable? (S7.4.6.1(b))
  ___ Yes; this form is complete
  ___ No; go to 3

___ 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
  ___ Yes; this form is complete
  ___ No; go to 4

___ 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
  ___ Yes; go to 5.
  ___ No; this form is complete.

___ 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))
  ___ Yes-Pass; ___ **No-FAIL**
  Identify the part(s) on top or above the seat.
  ___ seat belt latch plate; ___ buckle; ___ seat belt webbing

___ 6. Are the remaining two seat belt parts accessible under normal conditions?
  ___ Yes-Pass; ___ **No-FAIL**

___ 7 The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
  ___ Yes-Pass; ___ **No-FAIL**

___ 8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)
  Yes-Pass; ___ **No-FAIL**

___ 9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
  ___ Yes-Pass; ___ **No-FAIL**

___ 10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
  Yes-Pass; _ **No-FAIL**

DATA SHEET 13
SEAT BELT GUIDES AND HARDWARE (S7.4.6)

NHTSA No.: C35306 Test Date: 06/06/03

Laboratory: TRC Inc. Test Technician(s): S. Bell

DESIGNATED SEATING POSITION: Third Row Right

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

X 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
  X Yes; this form is complete
  ___ No; go to 2
___ 2. Is the seat removable? (S7.4.6.1(b))
  ___ Yes; this form is complete
  ___ No; go to 3
___ 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
  ___ Yes; this form is complete
  ___ No; go to 4
___ 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
  ___ Yes; go to 5.
  ___ No; this form is complete.
___ 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))
  ___ Yes-Pass; ___ **No-FAIL**
  Identify the part(s) on top or above the seat.
  ___ seat belt latch plate; ___ buckle; ___ seat belt webbing
___ 6. Are the remaining two seat belt parts accessible under normal conditions?
  ___ Yes-Pass; ___ **No-FAIL**
___ 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
  ___ Yes-Pass; ___ **No-FAIL**
___ 8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)
  ___ Yes-Pass; ___ **No-FAIL**
___ 9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
  ___ Yes-Pass; ___ **No-FAIL**
___ 10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
  ___ Yes-Pass; ___ **No-FAIL**

DATA SHEET 30

VEHICLE WEIGHT, FUEL TANK, AND ATTITUDE DATA

NHTSA No.: C35306 Test Date: 06/10/03

Laboratory: TRC Inc. Test Technician(s): R. Benavides

Impact Angle: 0° Belted Dummies: ____ Yes X No

Test Speed: X 32 to 40 km/h ____ 0 to 48 km/h ____ 0 to 56 km/h

Driver Dummy: X 5th female __ 50th male Passenger Dummy: X 5th female ___ 50th male

X 1. Fill the transmission with transmission fluid to the satisfactory range.
X 2. Drain fuel from vehicle
X 3. Run the engine until fuel remaining in the fuel delivery system is used and the engine stops.
X 4. Record the useable fuel tank capacity supplied by the COTR. 20.0 gallons (75.7 L)
X 5 Record the fuel tank capacity supplied in the owner's manual. 20.0 gallons (75.7 L)
X 6. Using purple dyed Stoddard solvent having the physical and chemical properties of Type 1 solvent or cleaning fluid, Table 1, ASTM Standard D484-71, "Standard Specifications for Hydrocarbon Dry-cleaning Solvents," or gasoline, fill the fuel tank.
Amount added 20.0 gallons
X 7. Fill the coolant system to capacity.
X 8. Fill the engine with motor oil to the max. mark on the dip stick.
X 9. Fill the brake reservoir with brake fluid to its normal level.
X 10. Fill the windshield washer reservoir to capacity.
X 11. Inflate the tires to the tire pressure on the tire placard. If no tire placard is available, inflate the tires to the recommended pressure in the owner's manual.

	RF	LF	RR	LR
Tire placard pressure	36	36	36	36
Owner's manual pressure	36	36	36	36
Actual inflated pressure	36	36	36	36

X 12. Record the vehicle weight at each wheel to determine the unloaded vehicle weight (UVW), i.e. "as delivered" weight).

Right Front =	547.0 kg	Right Rear =	426.5 kg
Left Front =	588.0 kg	Left Rear =	420.5 kg
TOTAL FRONT =	1135.0 kg	TOTAL REAR =	847.0 kg
% Total Weight =	57.3 %	% Total Weight =	42.7 %

UVW = TOTAL FRONT PLUS TOTAL REAR = 1982.0 kg

X 13. UVW Test Vehicle Attitude: (all dimensions in millimeters)
- X 13.1 Mark a point on the vehicle above the center of each wheel.
- X 13.2 Place the vehicle on a level surface.
- X 13.3 Measure perpendicular to the level surface to the 4 points marked on the body and record the measurements

RF 778 ; LF 768 ; RR 770 ; LR 765

_X_ 14. Calculate the Rated Cargo and Luggage Weight (RCLW).

_X_ 14.1 Does the vehicle have the vehicle capacity weight (VCW) on the certification label or tire placard?

_X_ Yes, go to 14.3.
___ No, go to 14.2.

___ 14.2 VCW = Gross Vehicle Weight – UVW
VCW = __________ - __________ = __________

_X_ 14.3 VCW = _525.3 kg_

_X_ 14.4 Does the certification or tire placard contain the Designated Seating Capacity (DSC)?

___ Yes, go to 14.6.
_X_ No, go to 14.5

_X_ 14.5 DSC = Total number of seat belt assemblies = _7_

___ 14.6 DSC = __________

_X_ 14.7 RCLW = VCW – (68 kg x DSC) = _525.3_ - (68 kg x _7_) = _49.3_

_X_ 14.8 Is the vehicle certified as a truck, MPV or bus (see the certification label on the door jamb)?

_X_ Yes. If the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.1)
___ No, use the RCLW calculated in 14.7.

_X_ 15. Fully Loaded Weight (100% fuel fill)

_X_ 15.1 Place the appropriate test dummy in both front outboard seating positions.
Driver: _X_ 5th female ___ 50th male
Passenger: _X_ 5th female ___ 50th male

_X_ 15.2 Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.

X 15.3 Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))

_X_ 15.4 Record the vehicle weight at each wheel to determine the Fully Loaded Weight.

Right Front	=	572.0	kg	Right Rear	=	479.0	kg
Left Front	=	608.0	kg	Left Rear	=	469.0	kg
TOTAL FRONT	=	1180.0	kg	TOTAL REAR	=	948.0	kg
% Total Weight	=	55.5	%	% Total Weight	=	44.5	%
% GVW	=	55.5	%	% GVW	=	44.5	%

FULLY LOADED WEIGHT = TOTAL FRONT + TOTAL REAR = _2128.0_ kg

X 16. Fully Loaded Test Vehicle Attitude: (all dimensions in millimeters

_X_ 16.1 Place the vehicle on a level surface.

X 16.2 Measure perpendicular to the level surface to the 4 points marked on the body (see 13.1 above) and record the measurements
RF _763_ ; LF _756_ ; RR _750_ ; LR _750_

_X_ 17. Drain the fuel system

_X_ 18. Using purple dyed Stoddard solvent having the physical and chemical properties of Type 1 solvent or cleaning fluid, Table 1, ASTM Standard D484-71, "Standard Specifications for Hydrocarbon Dry-cleaning Solvents," fill the fuel tank to 94 percent of useable capacity.
Fuel tank capacity x .94 = _20 gal._ x .94 = _18.8 gal._
Amount added _1.2 gal._

_X_ 19. Crank the engine to fill the fuel delivery system with Stoddard solvent.

X 20. Calculate the test weight range.

- X 20.1 Calculated Weight = UVW (see 12 above) + RCLW (see 14 above) + 2x(dummy weight)

  2129.3 = 1982.0 + 49.3 + 98.0

- ___ 20.2 Test Weight Range = Calculated Weight (- 4.5 kg, - 9 kg.)

  Max. Test Weight = Calculated Test Weight – 4.5 kg = 2124.8

  Min. Test Weight = Calculated Test Weight – 9 kg = 2120.3

X 21. Remove the RCLW from the cargo area.

X 22. Drain transmission fluid, engine coolant, motor oil, and windshield washer fluid from the test vehicle so that Stoddard solvent leakage from the fuel system will be evident.

X 23. Vehicle Components Removed For Weight Reduction:

N/A

X 24. Secure the equipment and ballast in the load carrying area and distribute it, as nearly as possible, to obtain the proportion of axle weight indicated by the gross axle weight ratings and center it over the longitudinal centerline of the vehicle.

X 25. If necessary, add ballast to achieve the actual test weight.

___ N/A

Weight of ballast 41.7 kg

X 26. Ballast, including test equipment, must be contained so that it will not shift during the impact event or interfere with data collection or interfere with high-speed film recordings or affect the structural integrity of the vehicle or do anything else to affect test results. Care must be taken to assure that any attachment hardware added to the vehicle is not in the vicinity of the fuel tank or lines.

X 27. Record the vehicle weight at each wheel to determine the actual test weight.

Right Front	=	573.4	kg	Right Rear	=	481.4	kg
Left Front	=	596.8	kg	Left Rear	=	468.0	kg
TOTAL FRONT	=	1170.2	kg	TOTAL REAR	=	949.4	kg
% Total Weight	=	55.0	%	% Total Weigh	=	45.0	%
% GVW	=	46.0	%	% GVW	=	37.0	%

(%GVW = Axle GVW ÷ Vehicle GVW)

TOTAL FRONT PLUS TOTAL REAR = 2121.0 kg

X 28. Is the test weight between the Max. Weight and the Min. Weight (See 20.2)?

X Yes

No, explain why not.

X 29. Test Weight Vehicle Attitude: (all dimensions in millimeters)

- X 29.1 Place the vehicle on a level surface.
- X 29.2 Measure perpendicular to the level surface to the 4 points marked on the body (see 13 above) and record the measurements

  RF 751 ; LF 743 ; RR 741 ; LR 741

_X_ 30. Summary of test attitude

_X_ 30.1

AS DELIVERED: RF _778_; LF _768_; RR _770_; LR _765_

AS TESTED: RF _752_; LF _746_; RR _741_; LR _742_

FULLY LOADED: RF _763_; LF _756_; RR _750_; LR _750_

_X_ 30.2 Is the "as tested" test attitude equal to or between the "fully loaded" and "as delivered" attitude?

___ Yes

_X_ No, explain why not. As tested attitudes are lower than the fully loaded attitudes.

DATA SHEET 31

Vehicle Accelerometer Location

NHTSA No.: C35306   Test Date: 06/10/03

Laboratory: TRC Inc.   Test Technician(s): R. Benavides, D. Summers

Impact Angle: 0°   Belted Dummies: ____ Yes X No

Test Speed: X 32 to 40 km/h   ____ 0 to 48 km/h   ____ 0 to 56 km/h

Driver Dummy: X 5th female ___ 50th male Passenger Dummy: X 5th female ____ 50th male

X 1. Find the location where the vertical plane parallel to the longitudinal centerline of the vehicle and through the center of the left front outboard seating position intersects the left rear seat cross member. Install an accelerometer at this intersection on the rear seat cross member to record x-direction accelerations. Record the location on the following chart.

X 2. Find the location where the vertical plane parallel to the longitudinal centerline of the vehicle and through the center of the right front outboard seating position intersects the right rear seat cross member. Install an accelerometer at this intersection on the rear seat cross member to record x-direction accelerations. Record the location on the following chart.

X 3. Find the location where a vertical plane through the longitudinal centerline of the vehicle and a vertical transverse plane through the center of the two wheels on opposite sides of the engine intersect at the top of the engine. Install an accelerometer at this intersection to record x-direction accelerations. Record the location on the following chart.

X 4. Find the location where a vertical plane through the longitudinal centerline of the vehicle and a vertical transverse plane through the center of the two wheels on opposite sides of the engine intersect the bottom of the engine. Install an accelerometer at this intersection to record x-direction accelerations. Record the location on the following chart.

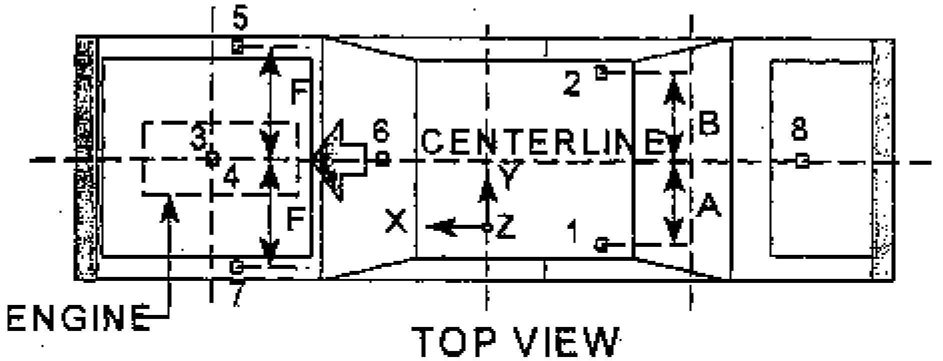
X 5. Install an accelerometer on the right front brake caliper to record x-direction accelerations. Record the location on the following chart.

X 6. Find the location where a vertical plane through the longitudinal centerline of the vehicle intersects the top of the instrument panel. Install an accelerometer at this intersection to record x-direction accelerations. Record the location on the following chart.

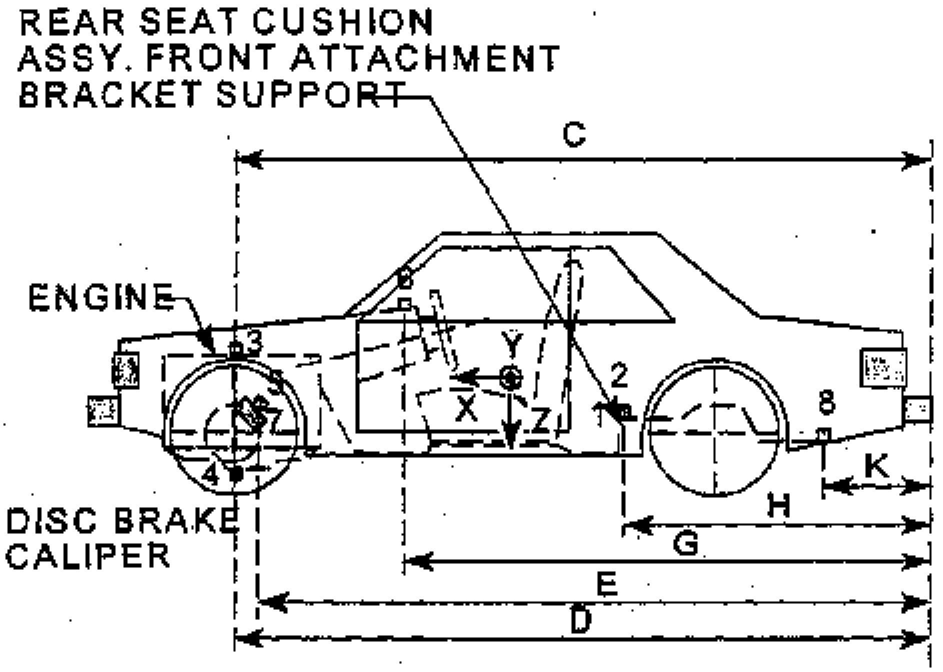
X 7. Install an accelerometer on the left front brake caliper to record x-direction accelerations. Record the location on the following chart.

X 8. Find the location where a vertical plane through the longitudinal centerline of the vehicle intersects the floor of the trunk. Install an accelerometer on the trunk floor at this intersection to record z-direction accelerations. Record the location on the following chart.

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



TOP VIEW



LEFT SIDE VIEW

DATA SHEET 31
VEHICLE ACCELEROMETER LOCATION MEASUREMENTS

DIMENSION	LENGTH (mm)
PRE-TEST VALUES	
A	760
B	760
C	4975
D	4375
E	4270 left; 4270 right
F	751 left; 751 right
G	4290
H	760 left; 760 right
K	915
POST-TEST VALUES	
A	760
B	760
C	4765
D	4255
E	4200 left; 4225 right
F	755 left; 749 right
G	4283
H	760 left; 760 right
K	915

REMARKS:

DATA SHEET 32

Photographic Targets

NHTSA No.: C35306 Test Date: 06/10/03

Laboratory: TRC Inc. Test Technician(s): R. Benavides

Impact Angle: 0° Offset percentage: N/A Belted Dummies: ____ Yes X No

Test Speed: X 32 to 40 km/h ____ 0 to 48 km/h ____ 0 to 56 km/h

Driver Dummy: X 5th female ____ 50th male Passenger Dummy: X 5th female ____ 50th male

1. FMVSS 208 vehicle targeting requirements (See Figures 28A and 28B)

X 1.1 Targets A1 and A2 are on flat rectangular panels.

X 1.2 Three circular targets at least 90 mm in diameter and with black and yellow quadrants are mounted at the front on the outboard sides of A1 and A2. The center of each circular target is 100 mm from the one next to it. Distance between targets 120 mm

X 1.3 Three circular targets at least 90 mm in diameter and with black and yellow quadrants are mounted at the back on the outboard sides of on A1 and A2. The center of each circular target is 100 mm from the one next to it. Distance between targets 120 mm

X 1.4 The distance between the first circular target at the front of A1 and A2 and the last circular target at the back of A1 and A2 is at least 915 mm. Distance between the first and last circular targets 915 mm

X 1.5 Firmly fix target A1 on the vehicle roof in the vertical longitudinal plane that is coincident with the midsagittal plane of the driver dummy.

X 1.6 Firmly fix target A2 on the vehicle roof in the vertical longitudinal plane that is coincident with the midsagittal plane of the passenger dummy.

X 1.7 Two circular targets (C1 and C2) at least 90 mm in diameter and with black and yellow quadrants are mounted on the outside of the driver door. The centers of each circular target are at least 610 mm apart. Distance between targets 610 mm

X 1.8 Two circular targets (C1 and C2) at least 90 mm in diameter and with black and yellow quadrants are mounted on the outside of the passenger door. The centers of each circular target are at least 610 mm apart. Distance between targets 610 mm

X 1.9 Place tape with squares having alternating colors on the top portion of the steering wheel.

X 1.10 Chalk the bottom portion of the steering wheel.

X 1.11 Is this an offset test?

____ Yes, continue with this section

X No, go to 2.

____ 1.12 Measure the width of the vehicle. Vehicle width 1930 mm

____ 1.13 Find the centerline of the vehicle. (½ of the vehicle width)

____ 1.14 Find the line parallel to the centerline of the vehicle and 0.1 x vehicle width from the centerline of the vehicle.

____ 1.15 Apply 25 mm wide tape with alternating black and yellow squares parallel to and on each side of the line found in 1.14. The edge of each tape shall be 50 mm from the line found in 1.14. The tape shall extend from the bottom of the bumper to the front edge of the windshield. (Figure 28D)

2. Barrier targeting

___ 2.1 Fix two stationary targets D1 and D2 to the barrier as shown in the Figure 28A. One target is in the vertical longitudinal plane that is coincident with the midsagittal plane of the driver dummy. The other is in the vertical longitudinal plane that is coincident with the midsagittal plane of the passenger dummy.

___ 2.2 Targets D1 and D2 are on a rectangular panel.

___ 2.3 Three circular targets at least 90 mm in diameter and with black and yellow quadrants are mounted on the sides of the rectangular panel away from the longitudinal centerline of the vehicle. The center of each circular target is 100 mm from the one next to it.

Distance between circular targets on D1 ___________ mm

Distance between circular targets on D2 ___________ mm

3. FMVSS 208 dummy targeting requirements

X 3.1 Place a circular target with black and yellow quadrants on both sides of the driver dummy head as close as possible to the center of gravity of the head in the x and z direction (relative to the measuring directions of the accelerometers).

X 3.2 Place a circular target with black and yellow quadrants on both sides of the passenger dummy head as close as possible to the center of gravity of the head in the x and z direction (relative to the measuring directions of the accelerometers).

X 3.3 Place a circular target with black and yellow quadrants on the outboard shoulder of the driver dummy. Place the target as high up on the arm as possible at the intersection of the arm and shoulder. The sleeve of the shirt on the dummy may be cut to make the target visible, but do not remove any material.

X 3.4 Place a circular target with black and yellow quadrants on the outboard shoulder of the passenger dummy. Place the target as high up on the arm as possible at the intersection of the arm and shoulder. The sleeve of the shirt on the dummy may be cut to make the target visible, but do not remove any material.

4. FMVSS 204 targeting requirements

X 4.1 Is an FMVSS 204 indicant test ordered on the "COTR Vehicle Work Order?"

___ Yes, continue with this form.

X No, this form is complete

___ 4.2 Resection panel (Figure 28C)

___ 4.2.1 The panel deviates no more than 6 mm from perfect flatness when suspended vertically.

___ 4.2.2 The 8 targets on the panel are circular targets at least 90 mm in diameter and with black and yellow quadrants.

___ 4.2.3 The center of each of the 4 outer targets are placed within 1 mm of the corners of a square measuring 914 mm on each side.

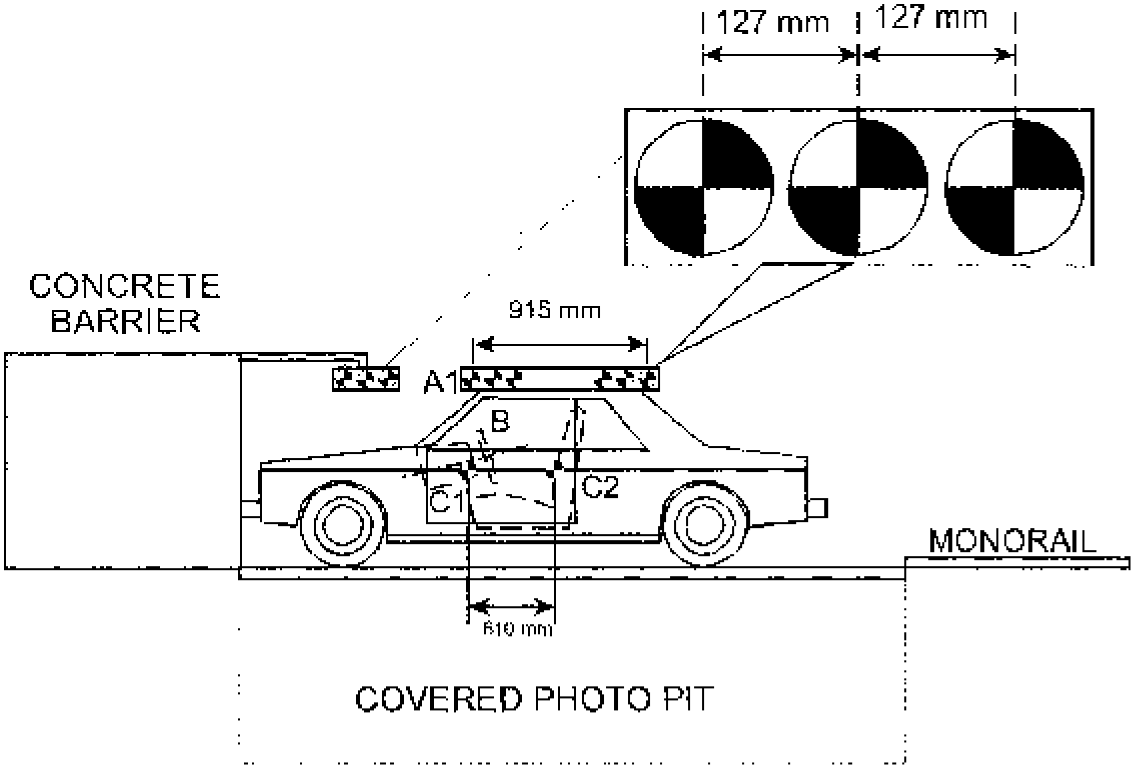
___ 4.2.4 Locate another square with 228 mm sides and with the center of this square coincident with the center of the 914 mm square.

___ 4.2.5 The center of the 4 inner targets are placed at the midpoints of each of the 228 mm sides.

___ 4.3 Place a circular target at least 90 mm in diameter and with black and yellow quadrants on a material (cardboard, metal, etc.) that can be taped to the top of the steering column.

___ 4.4 Tape the target from 4.3 to the top of the steering column in a manner that does not interfere with the movement of the steering column in a crash.

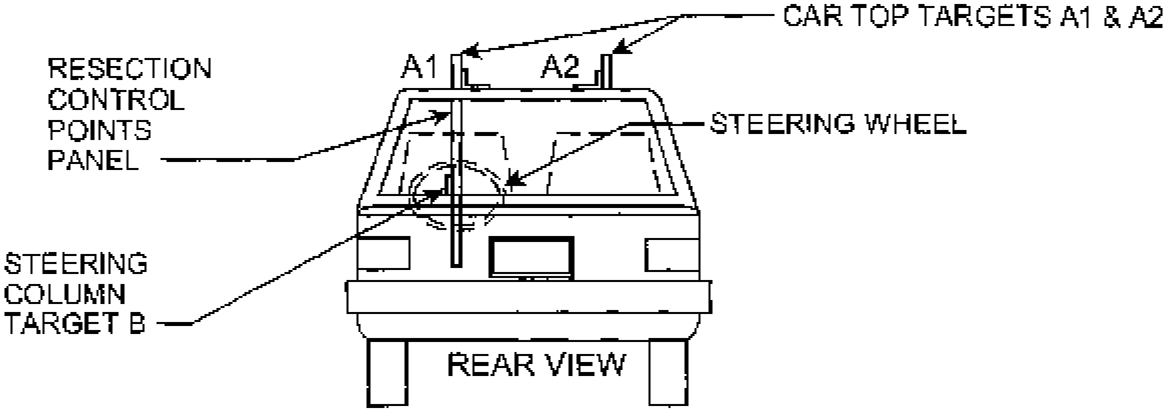
REFERENCE PHOTO TARGETS



LEFT SIDE VIEW

FIGURE 28A

RESECTION PANEL TARGETING ALIGNMENT



TEST RUN STEERING COLUMN CAMERA VIEW OF TYPICAL TIME ZERO VEHICLE POSITION

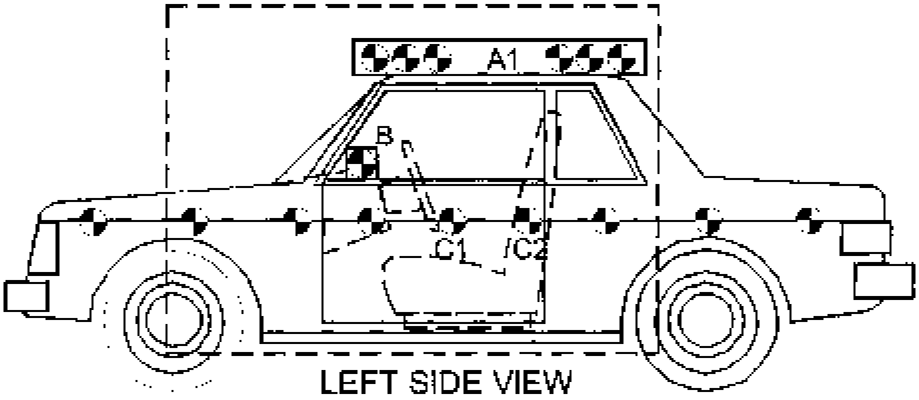
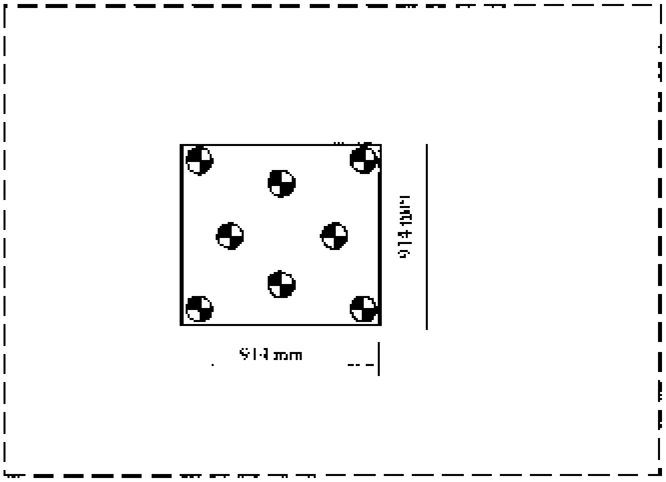


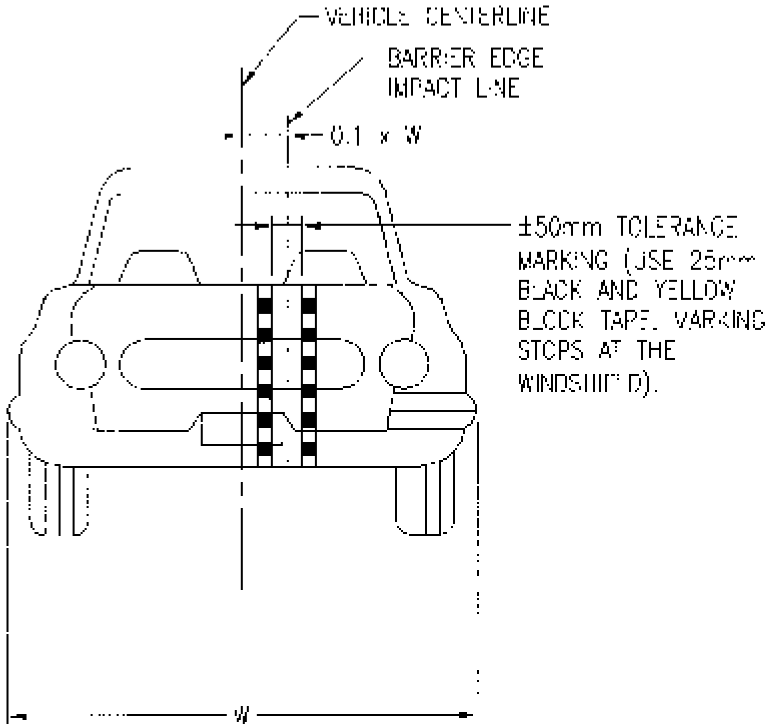
FIGURE 28B

PRE-RUN STEERING COLUMN HIGH SPEED CAMERA VIEW



LEFT SIDE VIEW

FIGURE 28C


VEHICLE CENTERLINE
BARRIER EDGE IMPACT LINE
0.1 x W
±50mm TOLERANCE MARKING (USE 25mm BLACK AND YELLOW BLOCK TAPE, MARKING STOPS AT THE WINDSHIELD).
W

OFFSET DEFORMABLE BARRIER
ADDITIONAL VEHICLE TARGETING

FIGURE 28D

DATA SHEET 33
CAMERA LOCATIONS

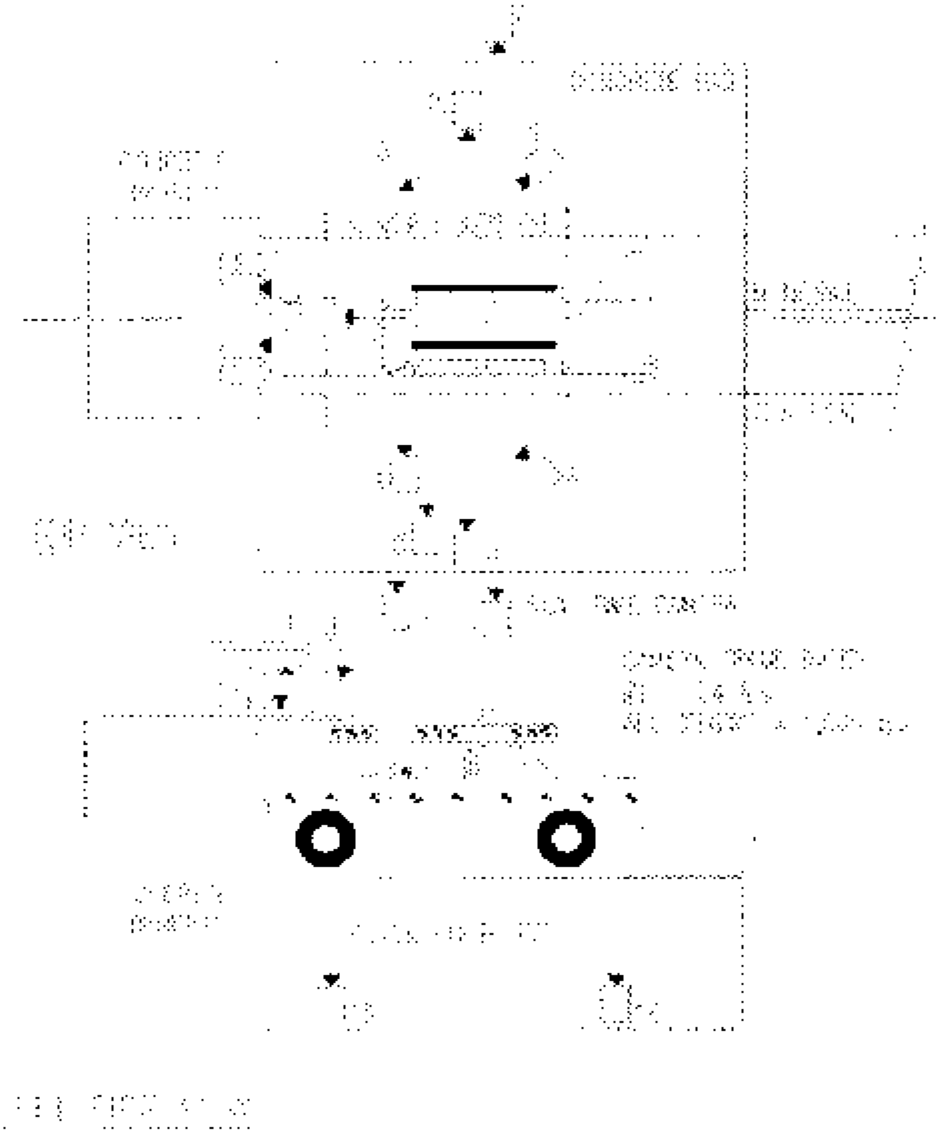
VEH. NHTSA No.: C35306 ; TEST DATE: 06/10/03 ; TIME: 1220

VEH. YEAR/MAKE/MODEL/BODY STYLE: 2003/Honda/Odyssey/MPV

CAMERA NO.	VIEW	CAMERA POSITIONS (mm) *			ANGLE (deg.)	FILM PLANE TO HEAD TARGET	LENS (mm)	SPEED (fps)
		X	Y	Z				
1	Left Side View							24
2	Left Side View (barrier face to front seat backs)	-1050	-9250	-1460	-2.7	8850	25	1010
3	Left Side View (A-post)	-1250	-8750	-1340	1.6	8300	35	1000
4	Left Side View (B-post aimed toward center of steering wheel)	-4800	-4000	-2100	-9.4	4500	25	1000
5	Left Side View (B-post)	-1650	-7000	-2250	-9.5	6500	25	1000
6	Left Side View (front door under camera 5)	-1650	-7100	-1450	3.7	6600	25	1000
7	Right Side View (overall)	-2400	9100	-1180	-2.5	8400	13	1000
8	Right Side View (A-post)	1600	6900	-1300	1.8	6350	25	1002
9	Right Side View (B-post)	-5100	3850	-1940	-4.0	4200	25	995
10	Right Side View (front door)	-750	9100	-1500	4.6	8400	25	1020
11	Front View Windshield	0	0	-2600	-54	2150	13	1020
12	Front View Driver	350	0	-2600	-57	2150	17	1000
13	Front View Passenger	350	0	-2600	-57	2150	17	1002
14	Overhead Barrier Impact View	730	0	-5650	-90	NA	13	1017
15	Pit Camera Engine View	-680	0	940	89	NA	17	1000
16	Pit Camera Fuel Tank View	2480	100	900	87	NA	13	1000

* +X - film plane forward (downstream) from barrier impact surface
+Y - film plane to right of monorail centerline from driver's perspective
+Z - film plane below ground level

CAMERA POSITIONS FOR FRONTAL IMPACTS



DATA SHEET 34
DUMMY POSITIONING PROCEDURES FOR TEST DUMMY CONFORMING TO SUBPART O OF PART 572
Seating Procedure 5th Percentile Female Driver Dummy (Part 572, Subpart O) (S16.2- S16.3)

NHTSA No.: C35306 Test Date: 06/10/03

Laboratory: TRC Inc. Test Technician(s): W. Miller, D. Schmitt

Test Number: 030610

X 1. Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment position. (S16.2.10.1)
  X N/A - No lumbar adjustment

X 2. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
  X N/A - No additional support adjustment

X 3. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S16.2.10.3.1)
  X N/A - No independent fore-aft seat cushion adjustment

X 4. Use the seat markings determined during the completion of Data Sheet 14 to set the rearmost fore-aft position, mid-height position and the seat cushion mid-angle. (S16.3.2.1.1)

X 5. If the vehicle has an adjustable accelerator pedal, place it in the full forward position. (S16.3.2.2.1)
  X N/A - accelerator pedal not adjustable

X 6. Set the steering wheel hub at the geometric center of the full range of driving positions including any telescoping positions as determined in data sheet 14. (S16.2.9)

X 7. Fully recline the seat back. (S16.3.2.1.2)
  ____ N/A - seat back not adjustable.

X 8. Place the dummy in the seat with the legs at an angle of 120 degrees to the thighs. The calves should not be touching the seat cushion. (S16.3.2.1.2)

X 9. Position the dummy in the seat such that the midsagittal plane is coincident with the longitudinal seat cushion markings as determined in item 1.18 of Data Sheet 14 (S16.3.2.1.3 and S16.3.2.1.4)

X 10. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.2.1.5)

X 11. Set the angle between the legs and the thighs to 120 degrees. (S16.3.2.1.6)

X 12. Set the transverse distance between the centers of the front of the knees at 160 to 170 mm. (6.3 to 6.7 inches) Center the knee separation with respect to the longitudinal seat cushion marking as determined in item 1.18 of Data Sheet 14. (S16.3.2.1.6)
  Record Knee Separation 165 mm

X 13. Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the calves contact the seat cushion, whichever occurs first. (S16.3.2.1.6)
  ____ Pelvis contacted seat back.
  X Calves contacted seat cushion.

X 14. Gently rock the upper torso ± 5 degrees (approximately 51 mm (2 inches)) side to side three time. (S16.3.2.1.7)

X 15. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.2.1.8)

X 16. Position the right foot until the foot is in line with a longitudinal vertical plane passing through the center of the accelerator pedal. Maintain the leg and thigh in a vertical plane. (S16.3.2.1.8)

X 17. Rotate the left leg and thigh laterally to equalize the distance between each knee and the longitudinal seat cushion marking as determined in item 1.18 of Data Sheet 14. (S16.3.2.1.8)

X 18. Attempt to return the seat to the foremost fore-aft position, mid-height, and seat cushion mid-angle. The foot may contact and depress the accelerator and/or change the angle of the foot with respect to the leg. (S16.3.2.1.8)

- X Foremost position achieved. Proceed to step 23.
- ____ Foremost not achieved because of foot interference. Proceed to step 20.
- ____ Foremost not achieved because of steering wheel contact.

X 19. If the dummy's legs contact the steering wheel, move the steering wheel up the minimum amount required to avoid contact. If the steering wheel is not adjustable separate the knees the minimum required to avoid contact. (S16.3.2.1.8)

- X N/A - there was no leg contact
- ____ Steering wheel repositioned
- ____ Knees separated

X 20. If the left foot interferes with the clutch or brake pedals, rotate the left foot about the leg to provide clearance. If this is not sufficient, rotate the thigh outboard at the hip the minimum amount required for clearance. (S16.3.2.1.8)

- X N/A, No foot interference with pedals.
- ____ Foot adjusted to provide clearance.
- ____ Foot and Thigh adjusted to provide clearance.

X 21. Continue to move the seat. Use seat controls to line up the seat markings determined during the completion of Data Sheet 14 to set the foremost fore-aft position, mid-height position and the seat cushion mid-angle. If the dummy contacts the interior move the seat rearward until a maximum clearance of 5 mm (0.2 inches) is achieved or the seat is in the closest detent position that does not cause dummy contact. (S16.3.2.1.8)

- X Foremost, mid-height position and the seat cushion mid-angle reached
- ____ Dummy contact. Clearance set at maximum of 5mm
  Measured Clearance________________
- ____ Dummy contact. Seat set at nearest detent position.
  Seat position ___ detent positions rearward of foremost
  (foremost is position zero)

X 22. If the steering wheel was repositioned in step 19, return the steering wheel to the original position. If the steering wheel contacts the dummy before reaching the original position, position the wheel until a maximum clearance of 5mm (.2 inches) is achieved, or the steering wheel is in the closest detent position that does not cause dummy contact. (S16.3.2.1.8)

- X N/A Steering wheel was not repositioned.
- ____ Original position achieved.
- ____ Dummy contact. Clearance set at maximum of 5mm
  Measured Clearance________________
- ____ Dummy Contact. Steering wheel set at nearest detent position.
  Steering wheel position ___ detent positions upward of original position
  (Original position is position zero)

X 23. If the seat back is adjustable, rotate the seat back forward while holding the thighs in place. Continue rotating the seat back forward until the transverse instrument platform of the dummy head is level ± 0.5 degrees. If the head cannot be leveled using the seat back adjustment, or the seat back is not adjustable, use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.2.1.9)

- X Head Level Achieved. (Check all that apply)
  - ____ Head leveled using the adjustable seat back
  - ____ Head leveled using the neck bracket.
  Head Angle ____________ degrees
- ____ Head Level NOT Achieved. (Check all that apply)
  - ____ Head adjusted using the adjustable seat back
  - ____ Head adjusted using the neck bracket.
  Head Angle ____________ degrees

X 24. Verify the pelvis is not interfering with the seat bight. (S16.3.2.1.9)

- X No interference
- ____ Pelvis moved forward the minimum amount so that it is not caught in the seat bight.

X 25. Verify the dummy abdomen is properly installed (S16.3.2.1.9)

_X_ Abdomen still sealed properly into dummy

____ Abdomen was adjusted because it was not seated properly into dummy

X 26. Head Angle

_X_ N/A, neither the pelvis nor the abdomen were adjusted.

____ 26.1 Head still level (Go to 27)

____ 26.2 Head level adjusted

_X_ Head Level Achieved. (Check all that apply)

____ Head leveled using the adjustable seat back

____ Head leveled using the neck bracket.

Head Angle ____________ degrees

____ Head Level NOT Achieved. (Check all that apply)

____ Head adjusted using the adjustable seat back

____ Head adjusted using the neck bracket.

Head Angle ____________ degrees

_X_ 27. If the dummy torso contacts the steering wheel while performing step 23, reposition the steering wheel in the following order to eliminate contact.

_X_ N/A. No dummy torso contact with the steering wheel.

____ 27.1 Adjust telescoping mechanism.

____ N/A No telescoping adjustment.

____ Adjustment performed (fill in appropriate change)

Steering wheel moved ____ detent positions in the forward direction.

Steering wheel moved ____ mm in the forward direction.

____ 27.2 Adjust tilt mechanism.

____ N/A No tilt adjustment.

____ No adjustment performed.

____ Adjustment performed.

Steering wheel moved ____ detent positions Upward/Downward. (circle one)

Steering wheel moved ____ degrees Upward/Downward

____ 27.3 Adjust Seat in the aft direction.

____ No Adjustment performed.

____ Seat moved aft ___ mm from original position.

____ Seat moved aft ___ detent positions from the original position.

_X_ 28. Measure and set the pelvic angle using the pelvic angle gage TE-2504. The pelvic angle should be 20.0 degrees ± 2.5 degrees. If the pelvic angle cannot be set to the specified range because the head will not be level, adjust the pelvis as closely as possible to the angle range, but keep the head level.

_X_ Pelvic angle set to 20.0 degrees ± 2.5 degrees.

____ Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized.

_X_ Record the pelvic angle. __18.8__ degrees

_X_ 29. Check the dummy for contact with the interior after completing adjustments.

_X_ No contact.

____ Dummy in contact with interior.

____ Seat moved aft ___ mm from the previous position.

____ Seat moved aft ___ detent positions from the previous position.

_X_ 30. Check the dummy to see if additional interior clearance is obtained, allowing the seat to be moved forward.

_X_ N/A, Seat already at foremost position.

Clearance unchanged. No adjustments required.

____ Additional clearance available

____ Seat moved Forward ___ mm from the previous position.

____ Seat moved Forward ___ detent positions from the previous position.

_X_ 31. Driver's foot positioning, right foot. Place the foot perpendicular to the leg and determine if the heel contacts the floor pan at any leg position. If the heel contacts the floor pan proceed to step 32 otherwise, proceed to step 33.

X 32. Perform the following steps until either all steps are completed, or the foot contacts the accelerator pedal. Step 32.6 shall be completed in all cases.

_X_ 32.1 With the rear of the heel contacting the floor pan, move the foot forward until pedal contact occurs or the foot is at the full forward position.

____ 32.2 If the vehicle has an adjustable accelerator pedal, move the pedals rearward until pedal contact occurs or the pedals reach the full rearward position.

____ 32.3 Extend the leg, allowing the heel to lose contact with the floor until the foot contacts the pedal. Do not raise the toe of the foot higher than the top of the accelerator pedal. If the foot does not contact the pedal, proceed to the next step. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward.

____ 32.4 Angle the foot to achieve contact between the foot and the pedal. If the foot does not contact the pedal, return the foot to the perpendicular orientation. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward.

____ 32.5 Align the centerline of the foot with the vertical-longitudinal plane passing through the center of the accelerator pedal. Place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward.

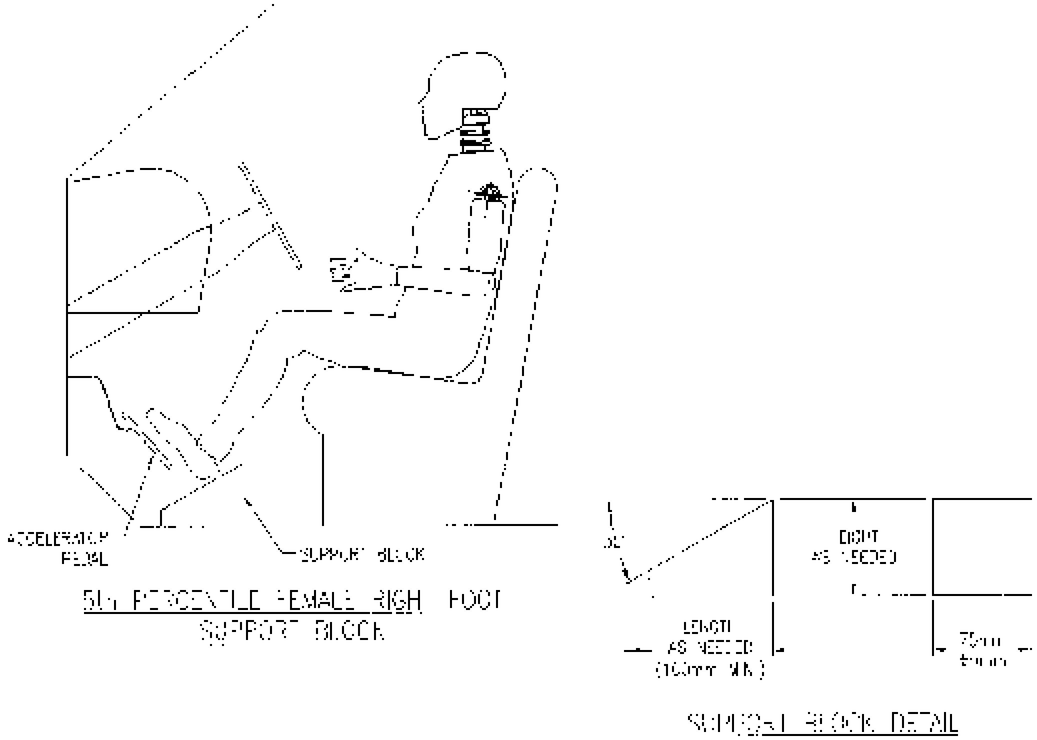
X_ _ 32.6 Record foot position

X _ Pedal Contact achieved. Contact occurred at step 32.1 __.

X Heel contacts floor pan

____ Heel set _____ mm from floor pan.

Pedal Contact not achieved. Heel set _____ mm from the floor pan.



5th PERCENTILE FEMALE RIGHT FOOT SUPPORT BLOCK

SUPPORT BLOCK DETAIL

FIGURE G1

33. Perform the following steps until either all steps are completed, or the foot contacts the accelerator pedal. Step 33.5 shall be completed in all cases.

_____ 33.1 Extend the leg until the foot contacts the pedal. Do not raise the toe of the foot higher than the top of the accelerator pedal. If the foot does not contact the pedal, proceed to the next step. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward.

_____ 33.2 If the vehicle has an adjustable accelerator pedal, move the pedals rearward until pedal contact occurs or the pedals reach the full rearward position. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward.

33.3 Angle the foot to achieve contact between the foot and the pedal. If the foot does not contact the pedal, return the foot to the perpendicular orientation. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward.

_____ 33.4 Align the centerline of the foot in the same horizontal plane as the centerline of the accelerator pedal. Place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward.

_____ 33.5 Record foot position

____ Pedal Contact achieved. Contact occurred at step ________.
Heel set _____ mm from floor pan.
____ Pedal Contact not achieved. Heel set _____ mm from the floor pan.

_X_ 34. Driver's foot positioning, left foot.

_X_ 34.1 Place the foot perpendicular to the leg and determine if the heel contacts the floor pan at any leg position. If the heel contacts the floor pan proceed to step 34.2, otherwise position the leg as perpendicular to the thigh as possible with the foot parallel to the floor pan.

_X_ 34.2 Place the foot on the toe board with the heel resting on the floor pan as close to the intersection of the floor pan and the toe board as possible. Adjust the angle of the foot if necessary to contact the toe board. If the foot will not contact the toe board, set the foot perpendicular to the leg, and set the heel on the floor pan as far forward as possible. Do not place the foot on the wheel well projection or footrest. If the pedals interfere with the placement of the foot, reposition the foot by rotating the foot about the leg, or rotate the leg outboard about the hip if necessary.

_X_ Foot rotated about the leg
_____ Foot rotated about the leg, and the leg rotated about the hip.
_____ No pedal interference

_X_ 34.3 Record foot position.

_____ Heel does not contact floor pan.
_____ Foot placed on toe board.
_X_ Foot placed on floor pan.

_X_ 35. Driver arm/hand positioning.

_X_ 35.1 Place the dummy's upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible. (S16.3.2.3.1)

_X_ 35.2 Place the palms of the dummy in contact with the outer part of the steering wheel rim at its horizontal centerline with the thumbs over the steering wheel rim. (S16.3.2.3.2)

_____ 35.3 If it is not possible to position the thumbs inside the steering wheel rim at its horizontal centerline, then position them above and as close to the horizontal centerline of the steering wheel rim as possible. (S16.3.2.3.3)

_X_ 35.4 Lightly tape the hands to the steering wheel rim so that if the hand of the test dummy is pushed upward by a force of not less than 9 N (2 lb) and not more than 22 N (5 lb), the tape releases the hand from the steering wheel rim. S16.3.2.3.4

_X_ 36. Adjustable head restraints

_____ N/A, there is no head restraint adjustment

_____ 36.1 If the head restraint has an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat. (S16.3.4.1) Go to 37.

X 36.2 Adjust each head restraint vertically so that the horizontal plane determined in item 3 of Data Sheet 14 is aligned with the center of gravity (CG) of the dummy head. (S16.3.4.3).

_X_ 36.3 If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG. (S16.3.4.3)

_X_ N/A midpoint position attained in previous step

____ Headrest set at nearest detent below the head CG

__ 36.4 If the head restraint has a fore and aft adjustment, place the restraint in the foremost position or until contact with the head is made, whichever occurs first. (S16.3.4.4)

____ 37. Driver and passenger manual belt adjustment (for tests conducted with a belted dummy). (S16.3.5)

____ 37.1 If an adjustable seat belt D-ring anchorage exists, place it in the manufacturer's design position for a 5th percentile adult female. **This information will be supplied by the COTR.**

Manufacturer's specified position ____________________________________

____

Actual Position ____

____

____ 37.2 Place the Type 2 manual belt around the test dummy and fasten the latch. (S16.3.5.2)

____ 37.3 Ensure that the dummy's head remains as level as possible. (S16.3.5.3)

____ 37.4 Remove all slack from the lap belt. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this operation four times. Apply a 9 N (2 lbf) to 18 N (4 lbf) tension load to the lap belt. If the belt system is equipped with a tension-relieving device, introduce the maximum amount of slack into the upper torso belt that is recommended by the manufacturer. If the belt system is not equipped with a tension-relieving device, allow the excess webbing in the shoulder belt to be retracted by the retractive force of the retractor. (S16.3.5.4)

Seating Procedure 5th Percentile Female Passenger Dummy (Part 572, Subpart O) (S16.2- S16.3)

NHTSA No.: C35306 Test Date: 06/10/03

Laboratory: TRC Inc. Test Technician(s): W. Miller, D. Schmitt

Test Number: 030610

(Check this item ONLY if it applies to this vehicle.)

____ The passenger seat adjustments are controlled by the adjustments made to the driver's seat. Therefore, positioning of the passenger dummy is made simultaneously with the driver dummy. Adjustments made to the seat to position the driver will over ride any adjustments that would normally be made to position the passenger. (S16.2.10.3)

_X_ 1. Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment position (S16.2.10.1)
  _X_ N/A – No lumbar adjustment

_X_ 2. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
  _X_ N/A – No additional support adjustment

_X_ 3. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S16.2.10.3.1)
  _X_ N/A – No independent fore-aft seat cushion adjustment

_X_ 4. Use the seat markings determined during the completion of Data Sheet 14 to set the rearmost fore-aft position, mid-height position and the seat cushion mid-angle. (S16.3.3.1.1)

_X_ 5. Fully recline the seat back. (S16.3.3.1.2)
  ____ N/A seat back not adjustable.

_X_ 6. Place the dummy in the seat with the legs at an angle of 120 degrees to the thighs. The calves should not be touching the seat cushion. (S16.3.3.1.2)

_X_ 7. Position the dummy in the seat such that the midsagital plane is coincident with the longitudinal seat cushion marking that was determined in item 2.19 of Data Sheet 14 (S16.3.3.1.3 and S16.3.3.1.4)

_X_ 8. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)

_X_ 9. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)

_X_ 10. Set the transverse distance between the centers of the front of the knees at 160 to 170 mm. (6.3 to 6.7 inches) Center the knee separation with respect to the longitudinal seat cushion marking that was determined in item 2.19 of Data Sheet 14. (S16.3.3.1.6)

Record Knee Separation 165

_X_ 11. Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the calves contact the seat cushion, whichever occurs first. (S16.3.3.1.6)
  ____ Pelvis contacted seat back.
  _X_ Calves contacted seat cushion.

_X_ 12. Gently rock the upper torso ± 5 degrees (approximately 51 mm (2 inches)) side-to-side three times. (S16.3.3.1.7)

_X_ 13. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)

X_ 14. Use seat controls to line up the seat markings determined during the completion of Data Sheet 14 to set the foremost fore-aft position, mid-height position and the seat cushion mid-angle. If the dummy contacts the interior move the seat rearward until a maximum clearance of 5 mm (0.2 inches) is achieved or the seat is in the closest detent position that does not cause dummy contact. (S16.3.3.1.8)
  __ Foremost, mid-height position and the seat cushion mid-angle reached
  _X_ Dummy contact. Clearance set at maximum of 5mm

Measured Clearance 5

_X__ Dummy contact. Seat set at nearest detent position.
Seat position _1___ detent positions rearward of foremost
(foremost is position zero)

_X_ 15. If the seat back is adjustable, rotate the seat back forward while holding the thighs in place. Continue rotating the seat back forward until the transverse instrument platform of the dummy head is level ± 0.5 degrees. If head cannot be leveled using the seat back adjustment, or the seat back is not adjustable, use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, adjust the head as closely as possible to the ± 0.5 degree range. (S16.3.3.1.9 and S16.3.3.1.10)
(Check All That Apply)
_____ Seat back not adjustable
_____ Seat back not independent of driver side seat back
_X___ Head Level Achieved. (Check all that apply)
_X__ Head leveled using the adjustable seat back
____ Head leveled using the neck bracket.
Head Angle ____________ degrees
__ Head Level NOT Achieved. (Check all that apply)
____ Head adjusted using the adjustable seat back
____ Head adjusted using the neck bracket.
Head Angle ____________ degrees

_X_ 16. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
X_ No interference
_____ Pelvis moved forward the minimum amount so that it is not caught in the seat bight.

_X_ 17. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
X__ Abdomen still seated properly into dummy
_____ Abdomen was adjusted because it was not seated properly into dummy

_X_ 18. Head Angle
_X__ N/A, neither the pelvis nor the abdomen were adjusted.
__ 18.1 Head still level (Go to 19)
_____ 18.2 Head level adjusted
____ Head Level Achieved. (Check all that apply)
Head leveled using the adjustable seat back
__ Head leveled using the neck bracket
Head Angle ____________ degrees
____ Head Level NOT Achieved. (Check all that apply)
__ Head leveled using the adjustable seat back
___ Head leveled using the neck bracket
Head Angle ____________ degrees

_X_ 19. Measure and set the pelvic angle using the pelvic angle gage TE-2504. The pelvic angle should be 20.0 degrees ± 2.5 degrees. If the pelvic angle cannot be set to the specified range because the head will not be level, adjust the pelvis as closely as possible to the angle range, but keep the head level.
__ Pelvic angle set to 20.0 degrees ± 2.5 degrees.
_____ Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized.
_X__ Record the pelvic angle. __22.3_______ degrees

_X_ 20. Check the dummy for contact with the interior after completing adjustments.
_X___ No contact.
_____ Dummy in contact with interior.
__ Seat moved aft ____ mm from the previous position.
____ Seat moved aft ____ detent positions from the previous position.

_X_ 21. Verify the transverse instrument platform of the dummy head is level +/- 0.5 degrees. Use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.3.1.9, S16.3.3.1.10, and S16.3.3.1.11)
_X_ Head Level Achieved.
Head Angle _0_________ degrees
_____ Head Level NOT Achieved.
Head Angle ____________ degrees

X 22. Check the dummy to see if additional interior clearance is obtained, allowing the seat to be moved forward. (S16.3.3.1.12)

_____ N/A Bench Seat

_____ N/A Seat already at full forward position.

__X__ Clearance unchanged. No adjustments required.

_____ Additional clearance available

____ Seat moved Forward ____ mm from the previous position.

____ Seat moved Forward ____ detent positions from the previous position.

__X__ Seat moved Forward, Full Forward position reached.

__X__ 23. Passenger foot positioning (Indicate final position achieved) (S16.3.3.2)

_____ 23.1 Place feet flat on the toe board; OR

__X__ 23.2 If the feet cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible; OR

_____ 23.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan

__X__ 24. Passenger arm/hand positioning. (S16.3.3.3)

__X__ 24.1 Place the dummy's upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible. (S16.3.2.3.1)

__X__ 24.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)

__X__ 24.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)

__X__ 25. Adjustable head restraints

_____ N/A, there is no head restraint adjustment

_____ 25.1 If the head restraint has an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat. (S16.3.4.1) Go to 26.

__X__ 25.2 Adjust each head restraint vertically so that the horizontal plane determined in item 3 of Data Sheet 14 is aligned with the center of gravity (CG) of the dummy head. (S16.3.4.3)

_____ 25.3 If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG. (S16.3.4.3)

__ N/A midpoint position attained in previous step

__ Headrest set at nearest detent below the head CG

_____ 25.4 If the head restraint has a fore and aft adjustment, place the restraint in the foremost position or until contact with the head is made, whichever occurs first. (S16.3.4.4)

____ 26. Manual belt adjustment (for tests conducted with a belted dummy) S16.3.5

___ N/A. Unbelted test

_____ 26.1 If an adjustable seat belt D-ring anchorage exists, place it in the manufacturer's design position for a 5th percentile adult female. **This information will be supplied by the COTR.**

Manufacturer's specified position ______________________________

Actual Position ______________________________

_____ 26.2 Place the Type 2 manual belt around the test dummy and fasten the latch. (S16.3.5.2)

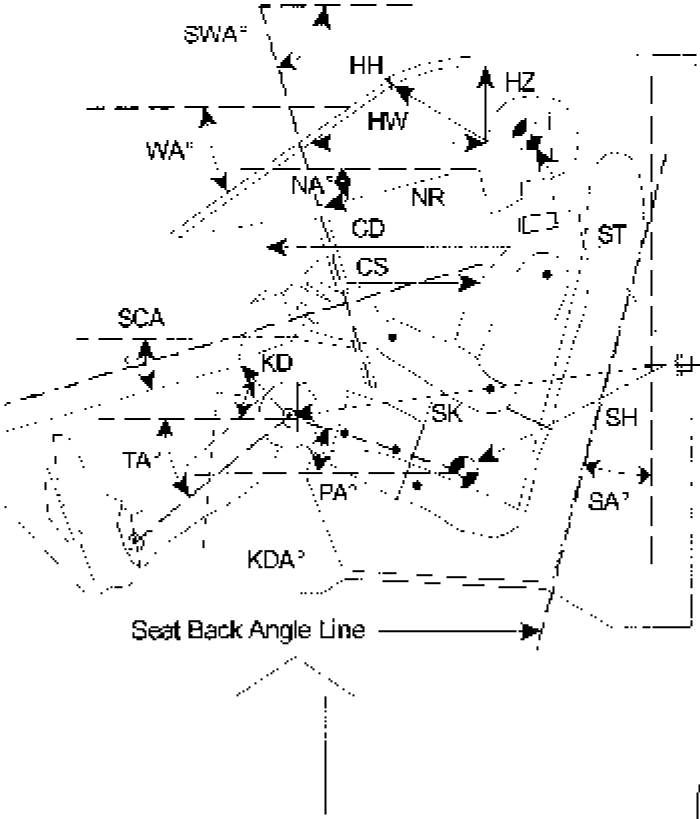
_____ 26.3 Ensure that the dummy's head remains as level as possible. (S16.3.5.3)

26.4 Remove all slack from the lap belt. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this operation four times. Apply a 9 N (2 lbf) to 18 N (4 lbf) tension load to the lap belt. If the belt system is equipped with a tension-relieving device, introduce the maximum amount of slack into the upper torso belt that is recommended by the manufacturer. If the belt system is not equipped with a tension-relieving device, allow the excess webbing in the shoulder belt to be retracted by the retractive force of the retractor. (S16.3.5.4)

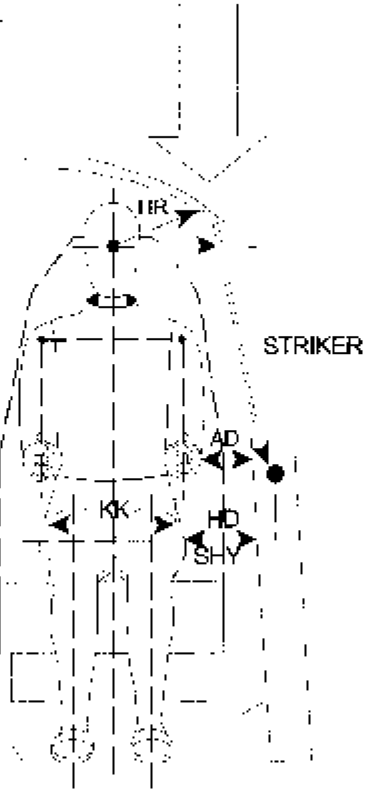
DATA SHEET 35
DUMMY POSITIONING MEASUREMENTS

	DRIVER (Serial No. 505)	PASSENGER (Serial No. 506)
WA°	31.3°	
SWA°	60.3°	N/A
SCA°	29.7°	N/A
SA°	3.9° at head rest	9.9° at head rest
HZ	272	300
HH	342	380
HW	616	719
HR	270	280
NR	303 ANGLE 10.6°	N/A
CD	470	440
CS	227	N/A
RA	75	N/A
KDL	78	71
KDR	84	75
PA°	18.6°	21.5°
TA°	57.9°	59.0°
KK	270	232
ST	600 ANGLE -60°	564 ANGLE -60.2°
SK	750 ANGLE 2.2°	757 ANGLE 1.8°
SH	424 ANGLE 11.9°	419 ANGLE 11.7°
SHY	272	310
HS	352	347
HD	186	191
AD	181	187

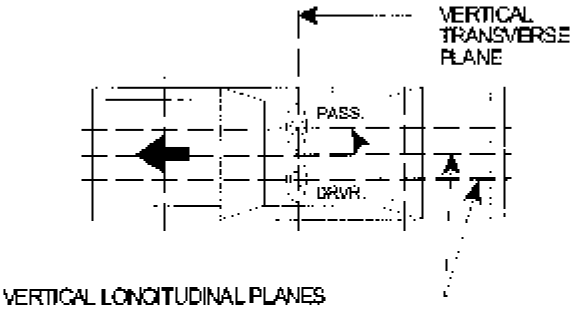
DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



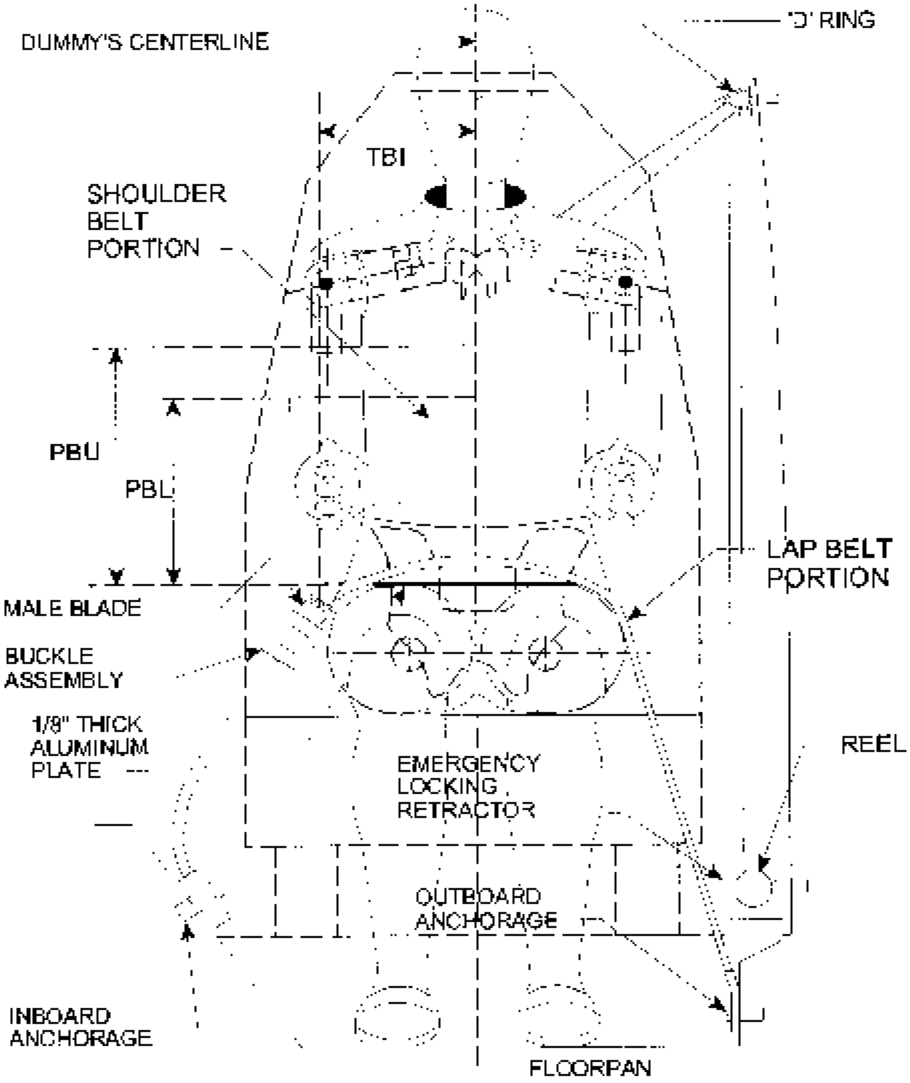
AD - Arm to Door
HD - H-Point to Door
HR - Head to Side Header
HS - Head to Side Window
KK - Knee to Knee
SHY- Striker to H-Point (Y Direction)



CD - Chest to Dash
CS - Steering Wheel to Chest
HH - Head to Header
HW - Head to Windshield
HZ - Head to Roof
KDA- Knee to Dash Angle
KDL- Left Knee to Dash
KDR- Right Knee to Dash
NA - Nose to Rim Angle
NR - Nose to Rim
PA - Pelvic Angle
RA - Rim to Abdomen
SA - Seat Back Angle
SCA- Steering Column Angle
SH - Striker to H-Point
SK - Striker to Knee
ST - Striker to Head
SWA- Steering Wheel Angle
TA - Tibial Angle
WA - Windshield Angle



SEAT BELT POSITIONING DATA



FRONT VIEW OF DUMMY

DESCRIPTIONS OF DUMMY MEASUREMENTS

When a level is to be used, it is to ensure that the line containing the two points described is either parallel or perpendicular to the ground. If a measurement to be made is less than 10 inches ignore the directions to use a level and approximate a level measurement. Also, when a measurement is to be taken to or from the center of a bolt on the dummy, take the measurement from the center of the bolt hole if the bolt is recessed.

The following measurements are to be made within a vertical longitudinal plane.

*	HH	Head to Header, taken from the point where the dummy's nose meets his forehead (between his eyes) to the furthest point forward on the header.
*	HW	Head to Windshield, taken from the point where the dummy's nose meets his forehead (between his eyes) to a point on the windshield. Use a level.
	HZ	Head to Roof, taken from the point where the dummy's nose meets his forehead (between his eyes) to the point on the roof directly above it. Use a level.
*	CS	Steering Wheel to Chest, taken from the center of the steering wheel hub to the dummy's chest. Use a level.
*	CD	Chest to Dash, place a tape measure on the tip of the dummy's chin and rotate five inches of it downward toward the dummy to the point of contact on the transverse center of the dummy's chest. Measure from this point to the closest point on the dashboard either between the upper part of the steering wheel between the hub and the rim, or measure to the dashboard placing the tape measure above the rim, whichever is a shorter measurement. See photograph.
	RA	Steering Wheel Rim to Abdomen, taken from the bottommost point of the steering wheel rim horizontally rearward to the dummy. Use a level.
	NR	Nose to Rim, taken from the tip of the dummy's nose to the closest point on the top of the steering wheel rim. Also indicate the angle this line makes with respect to the horizontal (NA).
*[1]	KDL, KDR	Left and Right Knees to Dashboard, taken from the center of the knee pivot bolt's outer surface to the closest point forward acquired by swinging the tape measure in continually larger arcs until it contacts the dashboard. Also reference the angle of this measurement with respect to the horizontal for the outboard knee (KDA). See photograph.
	SH, SK, ST	Striker to Hip, Knee, and Head, these measurements are to be taken in the X-Z plane measured from the forward most center point on the striker to the center of the H-point, outer knee bolt, and head target. When taking this measurement a firm device that can be rigidly connected to the striker should be used. Use a level. The angles of these measurements with respect to the

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* Measurement used in Data Tape Reference Guide

[1] Only outboard measurement is referenced in Data Tape Reference Guide

horizontal should also be recorded. The measurement in the Y (transverse) direction from the striker to the H-point should also be taken (SHY). See photograph.

The following measurements are to be made within a vertical transverse plane.

	HS	Head to Side Window, taken from the point where the dummy's nose meets his forehead (between his eyes) to the outside of the side window. In order to make this measurement, roll the window down to the exact height that allows a level measurement. Use a level. See photograph.
*	AD	Arm to Door, taken from the outer surface of the elbow pivot bolt on a Hybrid II dummy to the first point it hits on the door. In the case of a Hybrid III dummy, measure from the bolt on the outer biceps. When a SID is used make the measurement from the center of the bottom of the arm segment where it meets the dummy's torso.
*	HD	H-point to Door, taken from the H-point on the dummy to the closest point on the door. Use a level.
*	HR	Head to Side Header, measure the shortest distance from the point where the dummy's nose meets his forehead (between his eyes) to the side edge of the header just above the window frame, directly adjacent to the dummy.
	SHY	Striker to H-point, taken from a rod rigidly connected to the forward most center point on the striker to the H-point. Use a level. See photograph.
	KK	Knee to Knee, for Hybrid II dummies measure the distance between knee pivot bolt head outer surfaces. For Hybrid III dummies measure the distance between the outboard knee clevis flange surfaces. (This measurement may not be exactly transverse)

ANGLES

SA	Seat Back Angle, find this angle using the instructions provided by the manufacturer. If the manufacturer doesn't provide clear instructions contact the COTR
PA	Pelvic or Femur Angle, taken by inserting the pelvic angle gauge into the H-point gauging hole on the SID or the Hybrid III dummies and taking this angle with respect to the horizontal. Measure the angle of the line connecting the H-point hole and the outer knee pivot bolt hole on a Hybrid II dummy with respect to the horizontal, to find the femur angle.
SWA	Steering Wheel Angle, find this by placing a straight edge against the steering wheel rim along the longitudinal plane. Then measure the acute angle of the straight edge with respect to the horizontal.

* Measurement used in Data Tape Reference Guide

[†] Only outboard measurement is referenced in Data Tape Reference Guide

SCA	Steering Column Angle, measured with respect to the horizontal by placing an inclinometer on the center of the underside of the steering column.
NA	Measure the angle made when taking the measurement NR with respect to the horizontal.
KDA	Knee to Dash Angle, the angle that the measurement KD is taken at with respect to the horizontal. Only get this angle for the outboard knee. See photograph.
WA	Windshield Angle, place an inclinometer along the transverse center of the windshield exterior (measurement is made with respect to horizontal).
TA	Tibial Angle, use a straight edge to connect the dummy's knee and ankle bolts. Then place an inclinometer on the straight edge and measure the angle with respect to the horizontal.

DATA SHEET 36
CRASH TEST

NHTSA No.: C35306 Test Date: 06/10/03

Laboratory: TRC Inc. Test Technician(s): D. Schmitt

Impact Angle: 0° Belted Dummies: ___ Yes X No

Test Speed: X 32 to 40 km/h ___ 0 to 48 km/h ___ 0 to 56 km/h

Driver Dummy: X 5th female ___ 50th male Passenger Dummy: X 5th female ___ 50th male

X 1. Vehicle underbody painted
X 2. The speed measuring devices are in place and functioning.
X 3. The speed measuring devices are 4.8 m from the barrier (spec. 1.5m) and 30 cm from the barrier (spec. is 30 cm)
X 4. Convertible top is in the closed position.
  X N/A – Not a convertible
X 5. Instrumentation and wires are placed so the motion of the dummies during impact is not affected.
X 6. Tires inflated to pressure on tire placard or if it does not have a tire placard because it is not a passenger car, then inflated to the tire pressure specified in the owner information.
  248 kPa front left tire 250 kPa specified on tire placard or in owner information
  248 kPa front right tire 250 kPa specified on tire placard or in owner information
  248 kPa rear left tire 250 kPa specified on tire placard or in owner information
  248 kPa rear right tire 250 kPa specified on tire placard or in owner information
X 7. Time zero markers and switches in-place.
X 8. Pre test zero and shunt calibration adjustments performed and recorded
X 9. Dummy temperature meets requirements of section 12.2 of the test procedure.
X 10. Vehicle hood closed and latched
X 11. Transmission placed in neutral
X 12. Parking brake off
X 13. Ignition in the ON position
X 14. Doors closed and latched but not locked.
X 15. Post test zero and shunt calibration checks performed and recorded
X 16. Actual test speed 39.3 km/h
X 17. Vehicle rebound from the barrier 131.6 cm
X 18. Describe whether the doors open after the test and what method is used to open the doors.
  Left front door Easy
  Right front door Easy
  Left rear door Easy
  Right rear door Easy
X 19. Describe the contact points of the dummy with the interior of the vehicle.
  Driver dummy Head contacted airbag and head restraint. Chest contacted airbag. Both knees contacted knee bolster.
  Passenger dummy Head contacted airbag. Chest contacted airbag. Both knees contacted the glove box.

DATA SHEET 38
ACCIDENT INVESTIGATION MEASUREMENTS

NHTSA No.: C35306 Test Date: 06/10/03

Laboratory: TRC Inc. Test Technician(s): J. Jenkins

Impact Angle: 0° Belted Dummies: ____ Yes _X_ No

Test Speed: _X_ 32 to 40 km/h ____ 0 to 48 km/h ____ 0 to 56 km/h

Driver Dummy: X 5th female __ 50th male Passenger Dummy: X 5th female ___ 50th male

Vehicle Year/Make/Model/Body Style: 2003/Honda/Odyssey/MPV

VIN: 5FNRL18603B084369

Wheelbase: 3005 ; Build Date: 03/03

Veh. Size Category: SUV ; Test Weight: 2121.0

Front Overhang: 975 ; Overall Width: 1930

Veh. Impact Speed: 39.3 ; Vel. Change[1]: 43.3 km/h

Collision Deformation Classification (CDC) Code: 12FDEW2

---

[1] From integration of right rear seat crossmember X-axis accelerometer.

Impact Mode: _0° Front__

Crush Depth Dimensions:

C1 = _410______ mm

C2 = 390______ mm

C3 = _310________ mm

C4 = _308________ mm

C5 = _346________ mm

C6 = _415________ mm

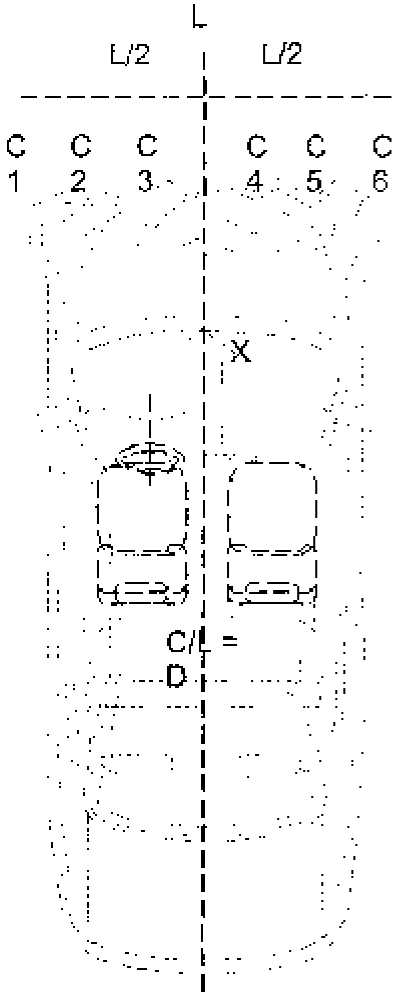
Midpoint of Damage: D= _0 mm_
(Left of Vehicle Longitudinal
Centerline)

Length of Damage Region:

L = _1525______ mm

REMARKS:

Numbered from left to right of
vehicle.



DATA SHEET 39
WINDSHIELD MOUNTING (FMVSS 212)

NHTSA No.: C35306 Test Date: 06/10/03

Laboratory: TRC Inc. Test Technician(s): R. Benavides, D. Summers

Impact Angle: 0° Belted Dummies: ___ Yes X No

Test Speed: X 32 to 40 km/h ___ 0 to 48 km/h ___ 0 to 56 km/h

Driver Dummy: X 5th female ___ 50th male Passenger Dummy: X 5th female ___ 50th male

Most vehicle windshields are either bonded in place and covered with chrome or plastic strips or they are held to the body by a rubber retainer. It is difficult to determine the exact periphery of the windshield because the glazing edge is hidden from view. The test engineer will measure the perimeter inside the retainer or molding at several locations. After the impact test the covering over the glazing edge may be removed for exact measurement of the windshield periphery. Do not disturb the molding or retainer in the event of a noncompliance.

1. Pre-Crash

X 1.1 Describe from visual inspection how the windshield is mounted and describe any trim material.
Rubber trim the sides and top. Plastic trim covering the bottom of windshield.

X 1.2 Mark the longitudinal centerline of the windshield.

X 1.3 Measure pre-crash A, B, and C for the left side and record in the chart below.

X 1.4 Measure pre-crash D, E, and F for the right side and record in the chart below.

X 1.5 Measure from the edge of the retainer or molding to the edge of the windshield.
Dimension G: 30 mm

2. Post Crash

X 2.1 Can a single thickness of copier type paper (as small a piece as necessary) slide between the windshield and the vehicle body?
X **No-Pass**. Skip to the table of measurements, complete it by repeating the pre-crash measurements in the post crash column, and calculate the retention percentage, which will be 100%.
___ Yes, go to 2.2.

___ 2.2 Visibly mark the beginning and end of the portions of the periphery where the paper slides between the windshield and the vehicle body.

___ 2.3 Measure and record post-crash A, B, C, D, E, and F such that the measurements do not include any of the parts of the windshield where the paper slides between the windshield and the vehicle body.

___ 2.4 Calculate and record the percent retention for the right and left side of the windshield.

___ 2.5 Is total right side percent retention less than 75%?
___ Yes, **FAIL**
___ No, Pass

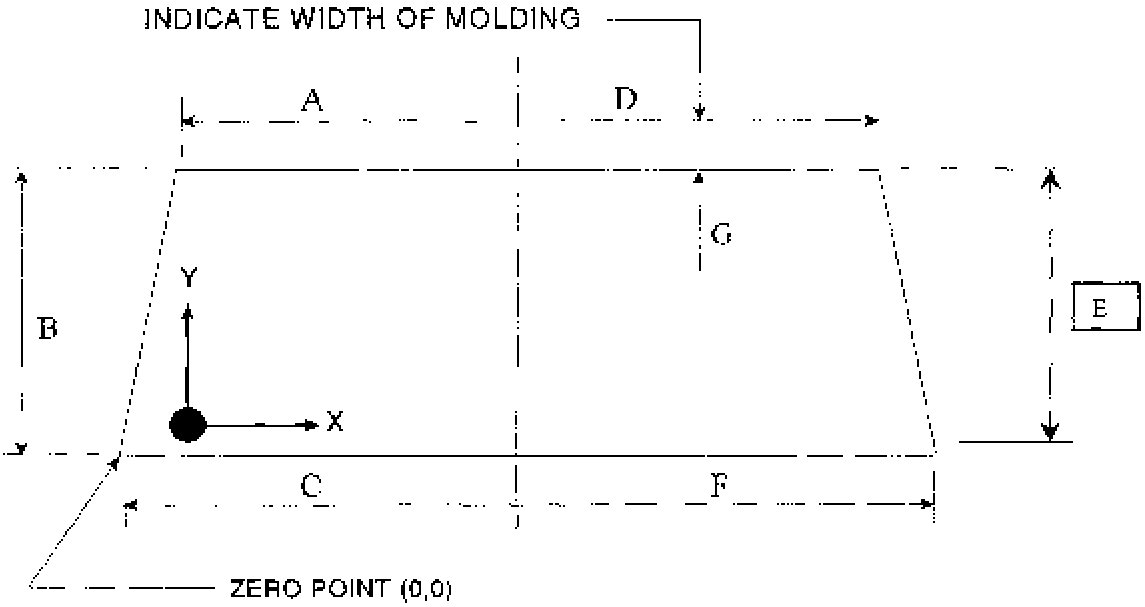
___ 2.6 Is total left side percent retention less than 75%?
___ Yes, **FAIL**
___ No, Pass

WINDSHIELD PERIPHERY MEASUREMENT

	Dimension	Pre-crash mm	Post-crash mm	Percent Retention (Post-crash ÷ Pre-crash)
Left side	A	610	610	
	B	875	875	
	C	825	825	
	Total	2310	2310	100%
Right side	D	610	610	
	E	875	875	
	F	845	845	
	Total	2330	2330	100%

Indicate area of mounting failure.

FRONT VIEW OF WINDSHIELD



DATA SHEET 40
WINDSHIELD ZONE INTRUSION (FMVSS 219)

NHTSA No.: C35306 Test Date: 06/10/03

Laboratory: TRC Inc. Test Technician(s): R. Benavides, D. Summers

Impact Angle: 0° Belted Dummies: __ Yes _X_ No

Test Speed: _X_ 32 to 40 km/h ____ 0 to 48 km/h ____ 0 to 56 km/h

Driver Dummy: X 5th female __ 50th male Passenger Dummy: _X_ 5th female __ 50th male

_X_ 1. Place a 165 mm diameter rigid sphere, with a mass of 6.8 kg on the instrument panel so that it is simultaneously touching the instrument panel and the windshield. (571.219 S6.1(a))

_X_ 2. Roll the sphere from one side of the windshield to the other while marking on the windshield where the sphere contacts the windshield. (571.219 S6.1(b))

_X_ 3. From the outermost contactable points on the windshield draw a horizontal line to the edges of the windshield. (571.219 S6.1(b))

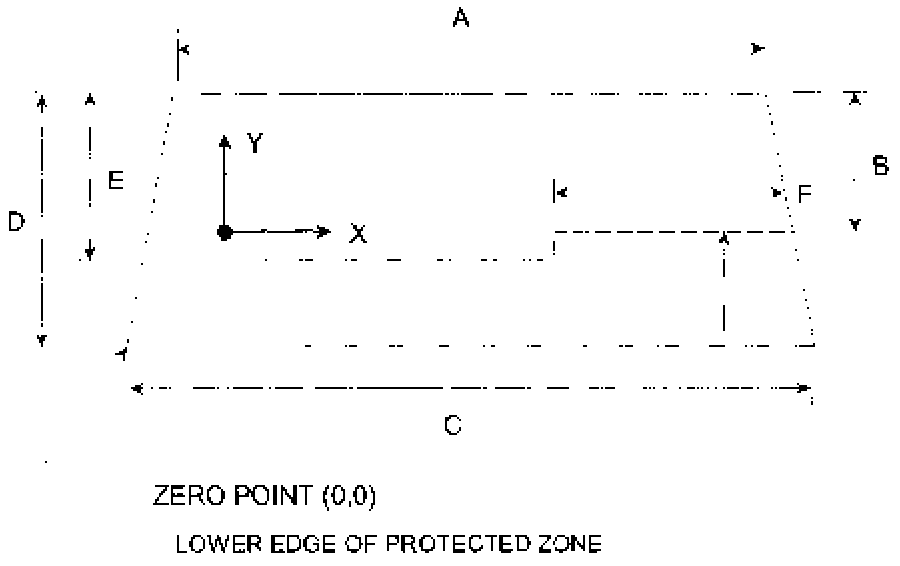
_X_ 4. Draw a line on the inner surface of the windshield that is 13 mm below the line determined in items 2 and 3.

_X_ 5. After the crash test, record any points where a part of the exterior of the vehicle has marked, penetrated, or broken the windshield.

SKETCH OF FRONT VIEW OF WINDSHIELD:

Provide all dimensions necessary to reproduce the protected area.

FRONT VIEW OF WINDSHIELD



A. Windshield Dimensions

A	B	C	D	E	F
1220	500	1670	875	560	700

AREA OF PROTECTED ZONE FAILURES:

B. Provide coordinates of the area that the protected zone was penetrated more than 0.25 inches by a vehicle component other than one which is normally in contact with the windshield.

X	Y

C. Provide coordinates of the area beneath the protected zone template that the inner surface of the windshield was penetrated by a vehicle component

X	Y

REMARKS:

No penetration into or beneath the protected zone.

DATA SHEET 41

FUEL SYSTEM INTEGRITY (FMVSS 301)

TEST VEHICLE NHTSA NO.: C35306 ; TEST DATE: 06/10/03

VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 2003/Honda/Odyssey/MPV

TYPE OF IMPACT: 0° Flat Frontal

STODDARD SOLVENT SPILLAGE MEASUREMENT:

A. From impact until vehicle motion ceases —

Actual = 0 grams. (Maximum Allowable = 28 grams)

B. For 5 minute period after vehicle motion ceases —

Actual = 0 grams. (Maximum Allowable = 142 grams)

C. For next 25 minutes –

Actual = 0 grams . (Maximum Allowable = 28 grams/minute)

D. Provide Spillage Details: None

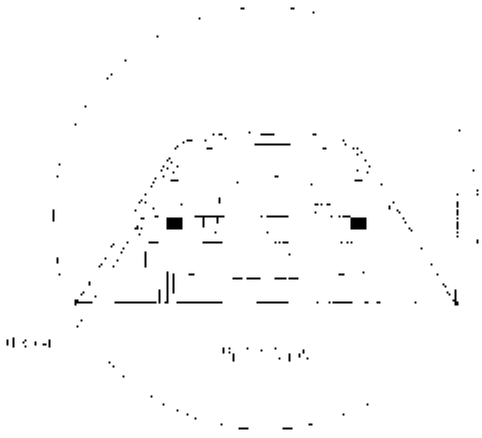
REMARKS:

No spillage occurred during the interval between test time and the start of the rollover.

FMVSS 301 STATIC ROLLOVER DATA SHEET

A. TEST PHASE = 0° TO 90°

Determination of Stoddard
Solvent Collection Time Period:



1. Rollover Fixture 90° Rotation Time –
   1 minutes, 0 seconds

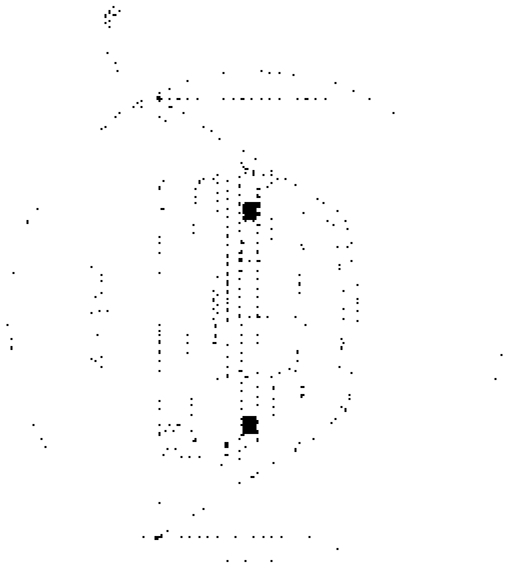
   (Specified Range is 1 to 3 minutes)

2. FMVSS 301 Position Hold
   Time = 5 minutes, 0 seconds

3. TOTAL – 6 minutes, 0 seconds

4. NEXT WHOLE MINUTE INTERVAL =
   7 minutes

Actual Test Vehicle Stoddard Solvent Spillage:



1. First 5 minutes from onset of
   rotation = 0 grams
   (142 grams allowed)

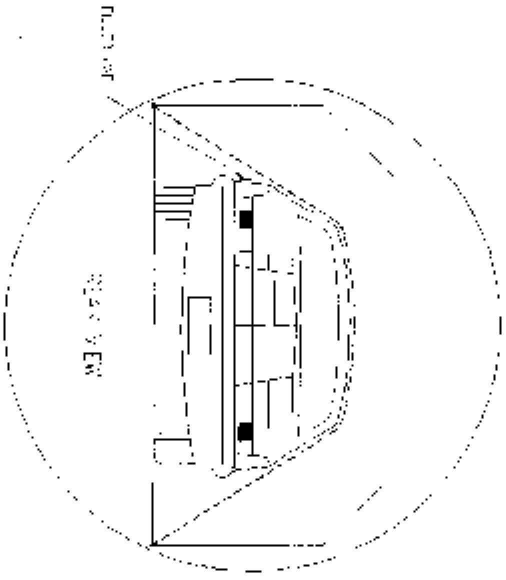
2. 6th minute = 0 grams
   (28 grams allowed)

3. 7th minute = 0 grams
   (28 grams allowed)

4. 8th minute (if required) – ____ grams
   (28 grams allowed)

Provide Details of Stoddard Solvent Spillage Locations – None

B. TEST PHASE – 90° TO 180°



Determination of Stoddard
Solvent Collection Time Period:

1. Rollover Fixture 90° Rotation Time –
   1 minutes, 0 seconds

   (Specified Range is 1 to 3 minutes)

2. FMVSS 301 Position Hold
   Time = 5 minutes, 0 seconds

3. TOTAL = 6 minutes, 0 seconds

4. NEXT WHOLE MINUTE INTERVAL =
   7 minutes

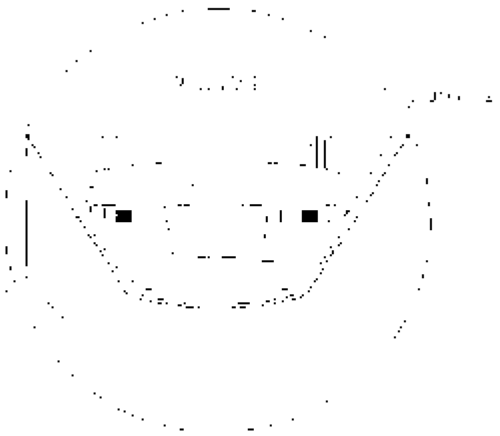
Actual Test Vehicle Stoddard
Solvent Spillage:

1. First 5 minutes from onset of
   rotation = 0 grams
   (142 grams allowed)

2. 6th minute = 0 grams
   (28 grams allowed)

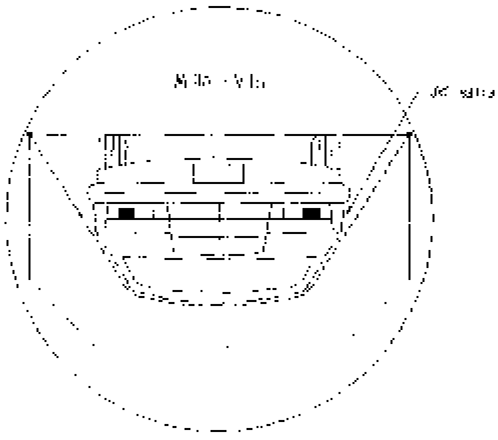
3. 7th minute = 0 grams
   (28 grams allowed)

4. 8th minute (if required) ____ grams
   (28 grams allowed)



Provide Details of Stoddard Solvent Spillage Locations – None

C. TEST PHASE – 180° TO 270°



Determination of Stoddard Solvent Collection Time Period:

1. Rollover Fixture 90° Rotation Time = _1_ minutes, _0_ seconds

   (Specified Range is 1 to 3 minutes)

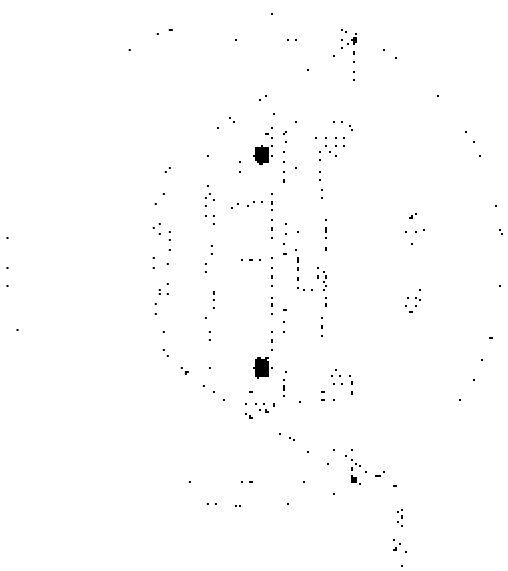
2. FMVSS 301 Position Hold Time – 5 minutes, 0 seconds

3. TOTAL = _6_ minutes, _0_ seconds

4. NEXT WHOLE MINUTE INTERVAL = _7_ minutes

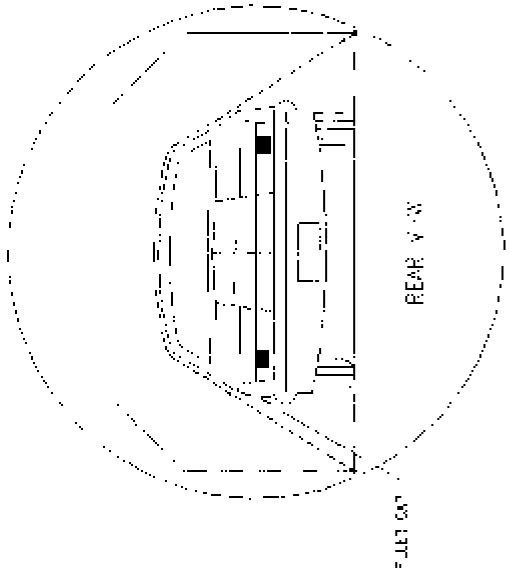
Actual Test Vehicle Stoddard Solvent Spillage:

1. First 5 minutes from onset of rotation = _0_ grams (142 grams allowed)
2. 6th minute = 0 grams (28 grams allowed)
3. 7th minute = _0_ grams (28 grams allowed)
4. 8th minute (if required) = ___ grams (28 grams allowed)



Provide Details of Stoddard Solvent Spillage Locations None

D. TEST PHASE – 270° TO 360°



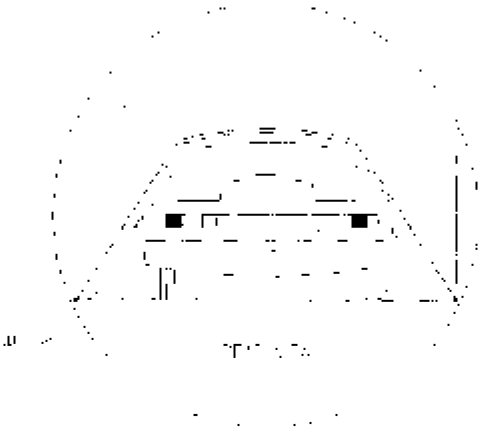
Determination of Stoddard
Solvent Collection Time Period:

1. Rollover Fixture 90° Rotation Time =
   _1__ minutes, _0__ seconds

   (Specified Range is 1 to 3 minutes)
2. FMVSS 301 Position Hold
   Time = 5 minutes, 0 seconds
3. TOTAL = _6__ minutes, _0__ seconds
4. NEXT WHOLE MINUTE INTERVAL =
   _7__ minutes

Actual Test Vehicle Stoddard
Solvent Spillage:

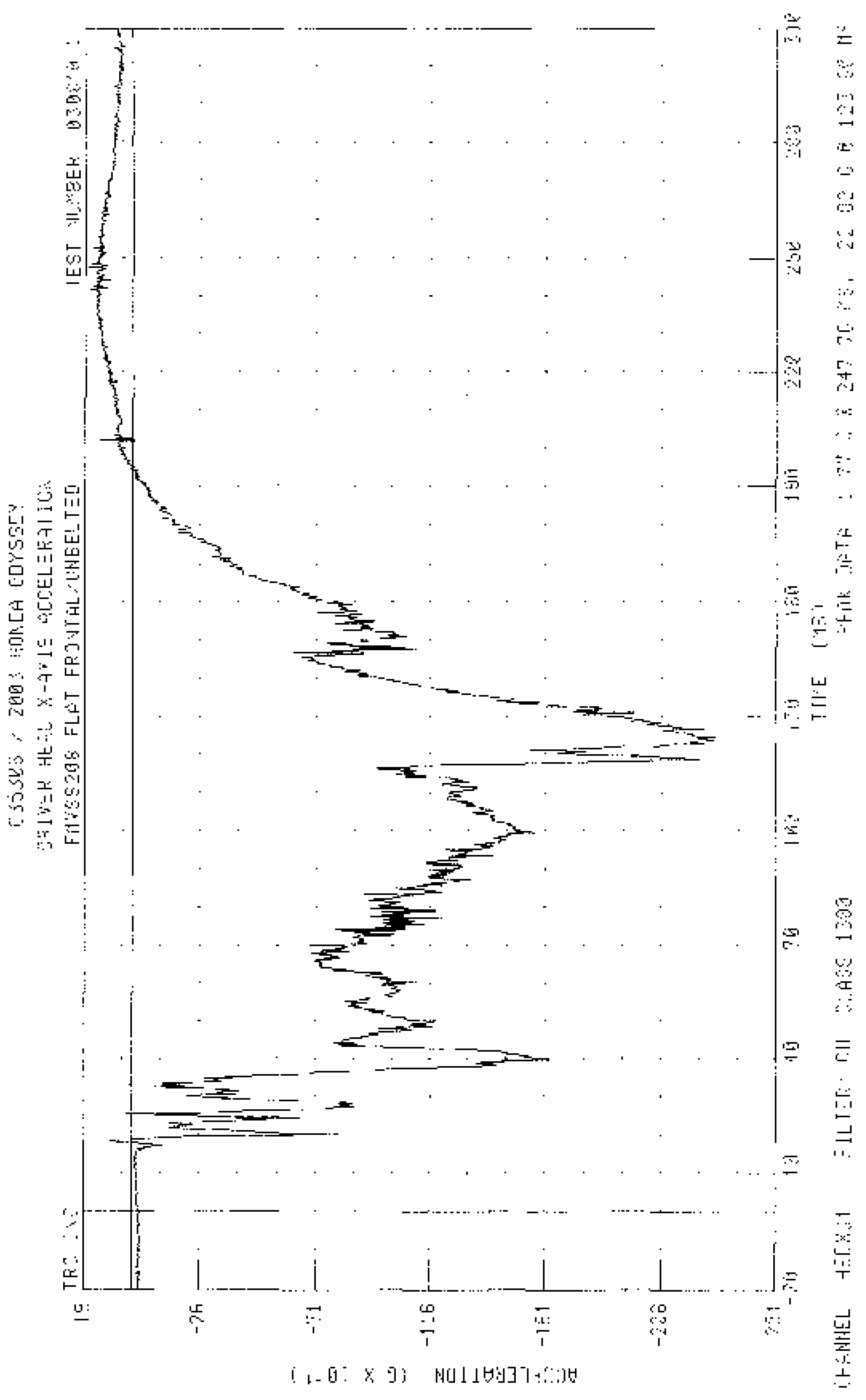
1. First 5 minutes from onset of
   rotation = _0__ grams
   (142 grams allowed)
2. 6th minute = _0__ grams
   (28 grams allowed)
3. 7th minute = _0__ grams
   (28 grams allowed)
4. 8th minute (if required) = ___ grams
   (28 grams allowed)

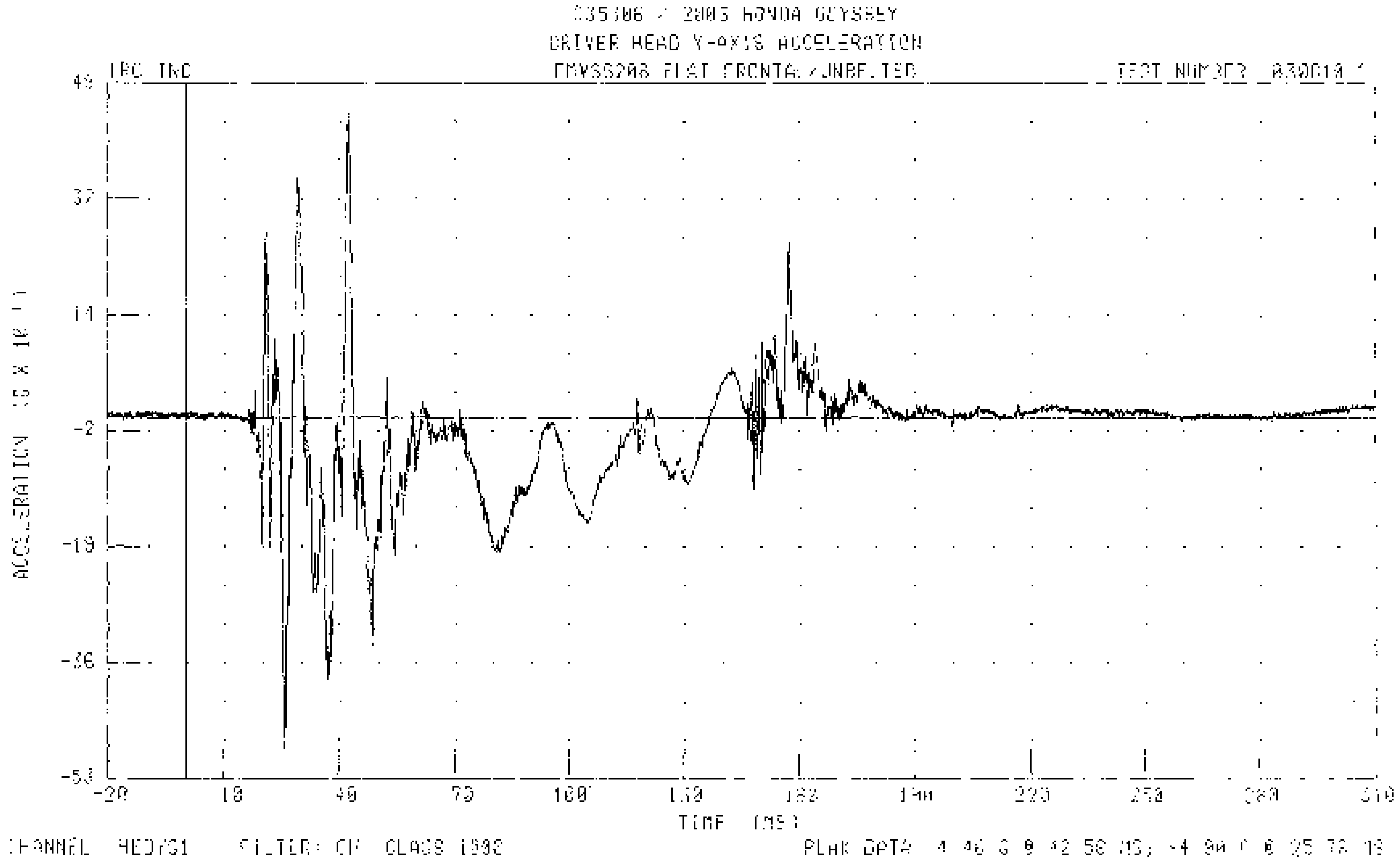


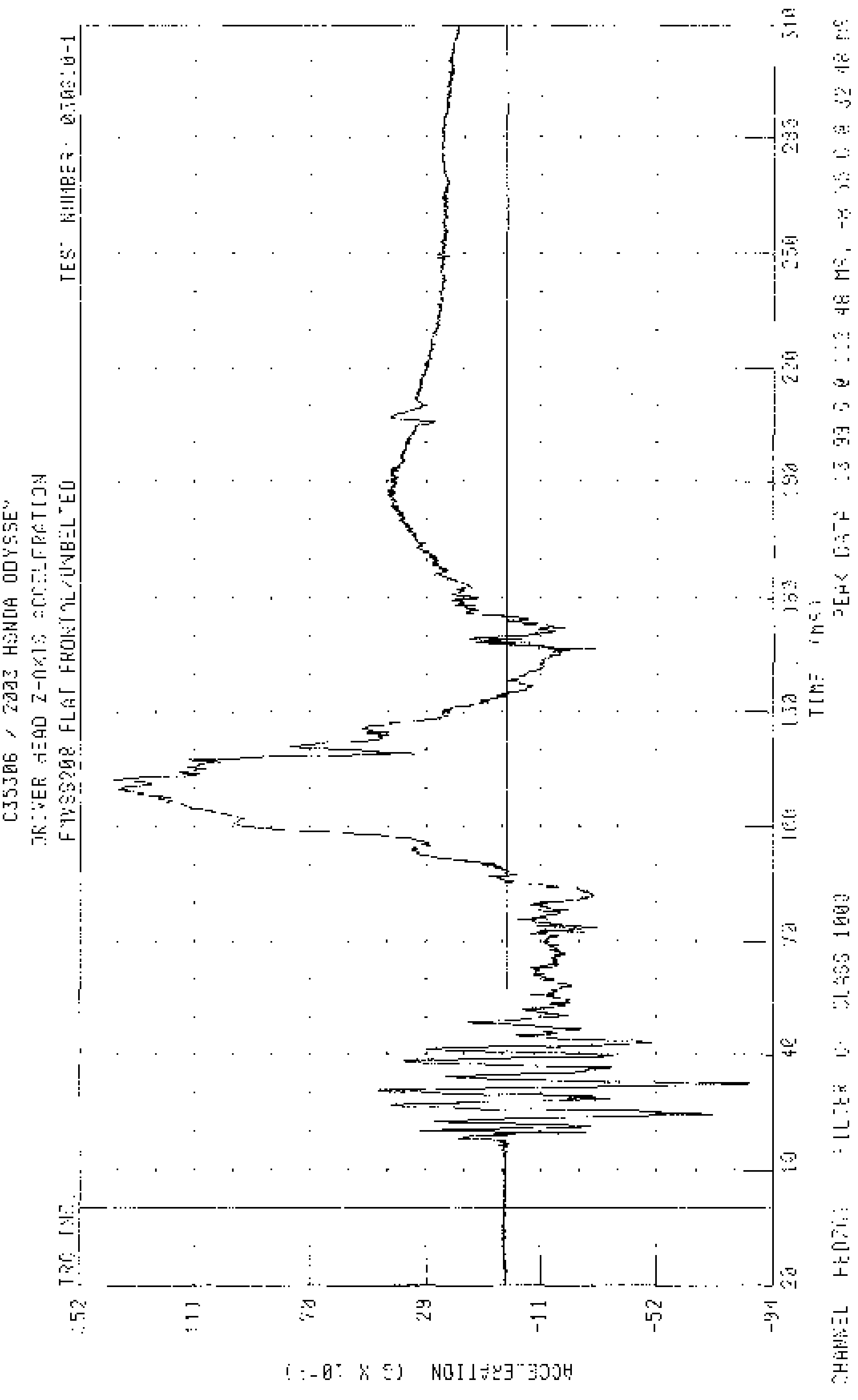
Provide Details of Stoddard Solvent Spillage Locations - None

Section 6

Test Data

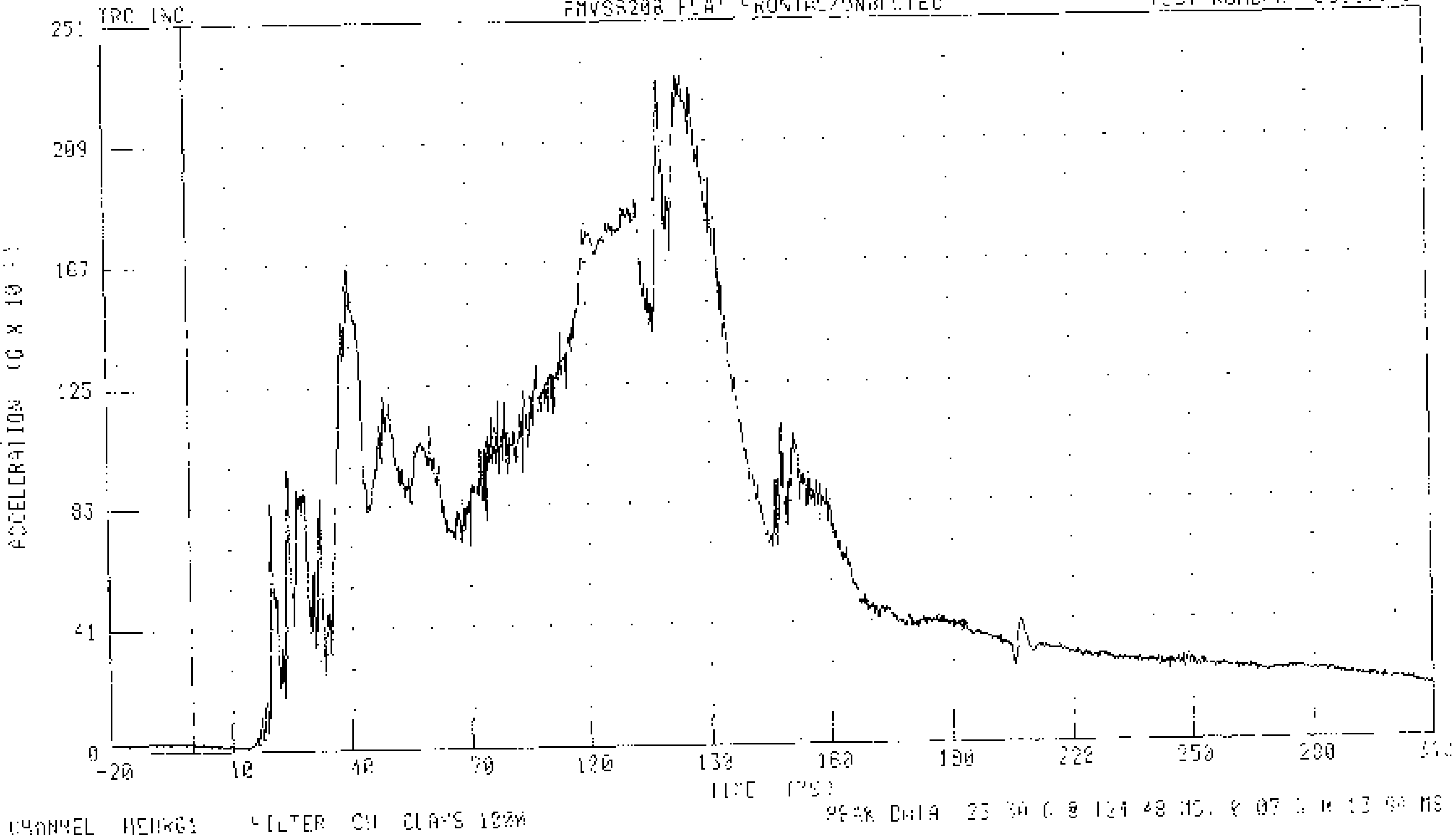

C3SSKS / 2003 HONDA ODYSSEY
DRIVER HEAD X-AXIS ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER 030610
TRC
ACCELERATION (G X 10-1)
19
-26
-71
-116
-161
-206
-251
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL HEAX01
FILTER ON CLASS 1000
PEAK DATA

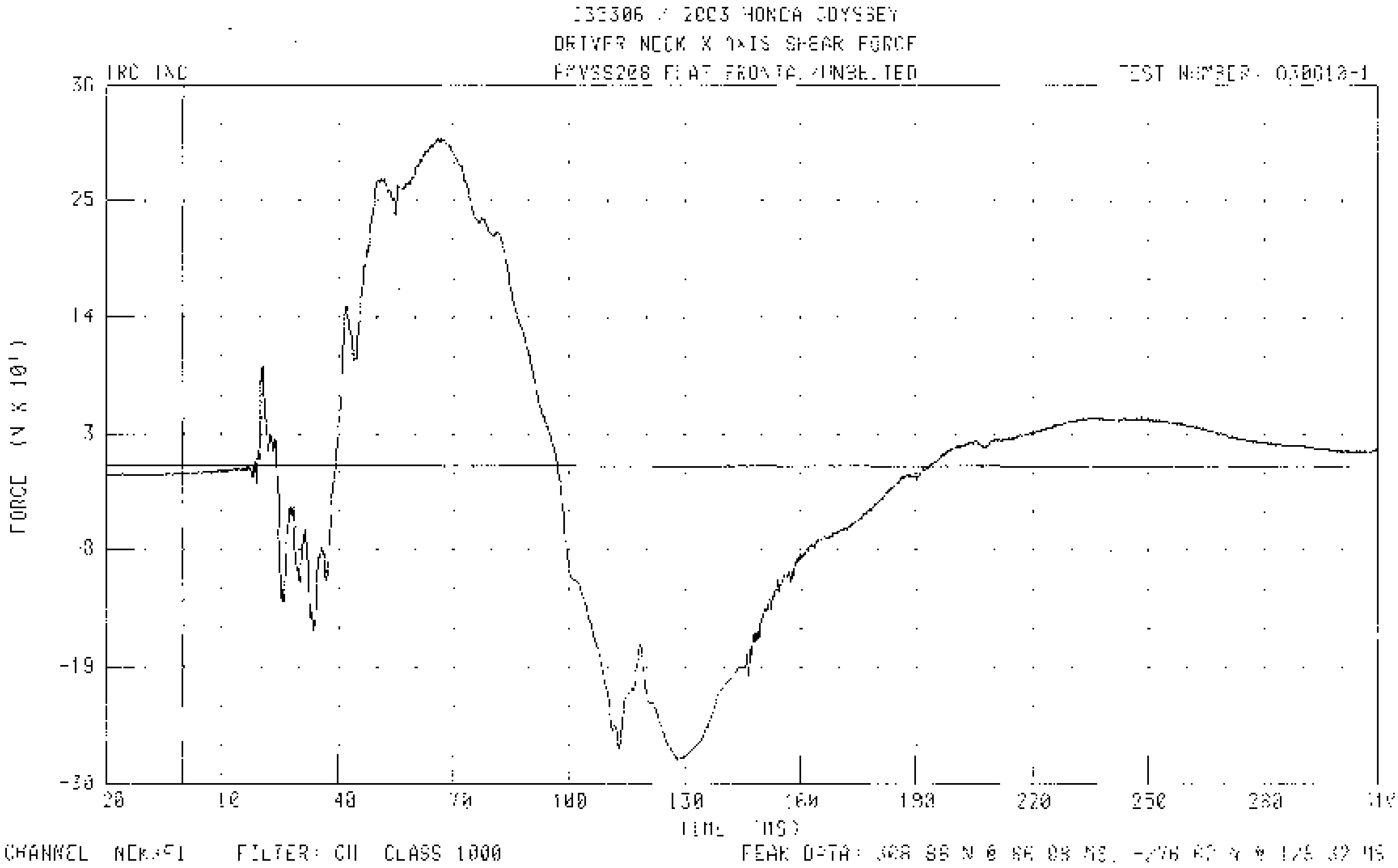
035306 / 2005 HONDA ODYSSEY
DRIVER HEAD Y-AXIS ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED
TRC INC
TEST NUMBER 030610 1
49
32
15
-2
-19
-36
-53
ACCELERATION (G X 10 -1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL HEDYG1
FILTER: CFC CLASS 1000
PEAK DATA 4.46 G @ 42.50 MS; -4.94 G @ 25.70 MS


C35306 / 2003 HONDA ODYSSEY
DRIVER HEAD Z-AXIS ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER: 030610-1
TRC_INC
152
111
70
29
-11
-52
-94
ACCELERATION (G X 10^-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL PROTOCOL FILTER CLASS 1000
PEAK DATA

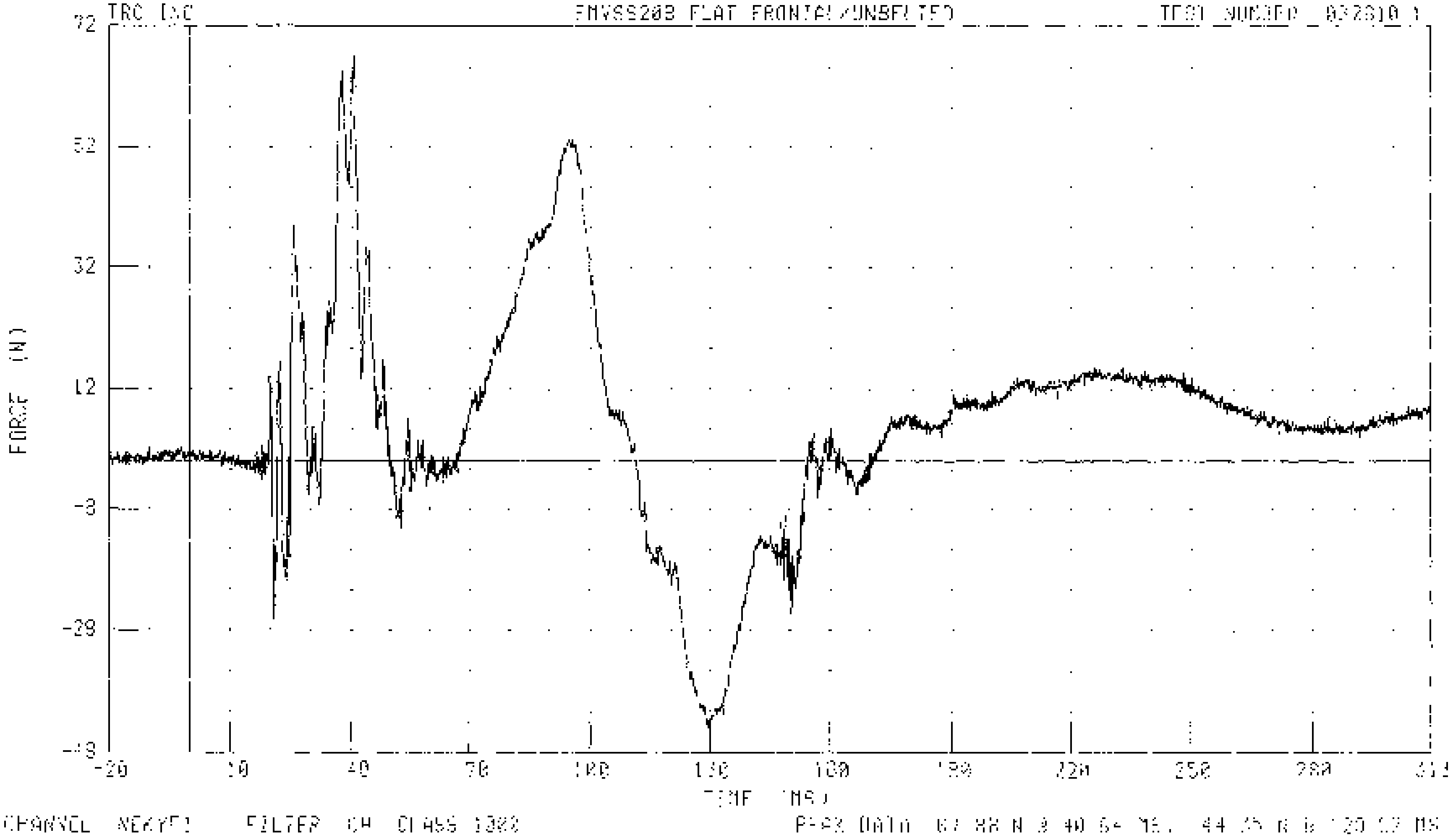
C35300 / 2003 HONDA ODYSSEY
DRIVER HEAD RESULTANT ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED

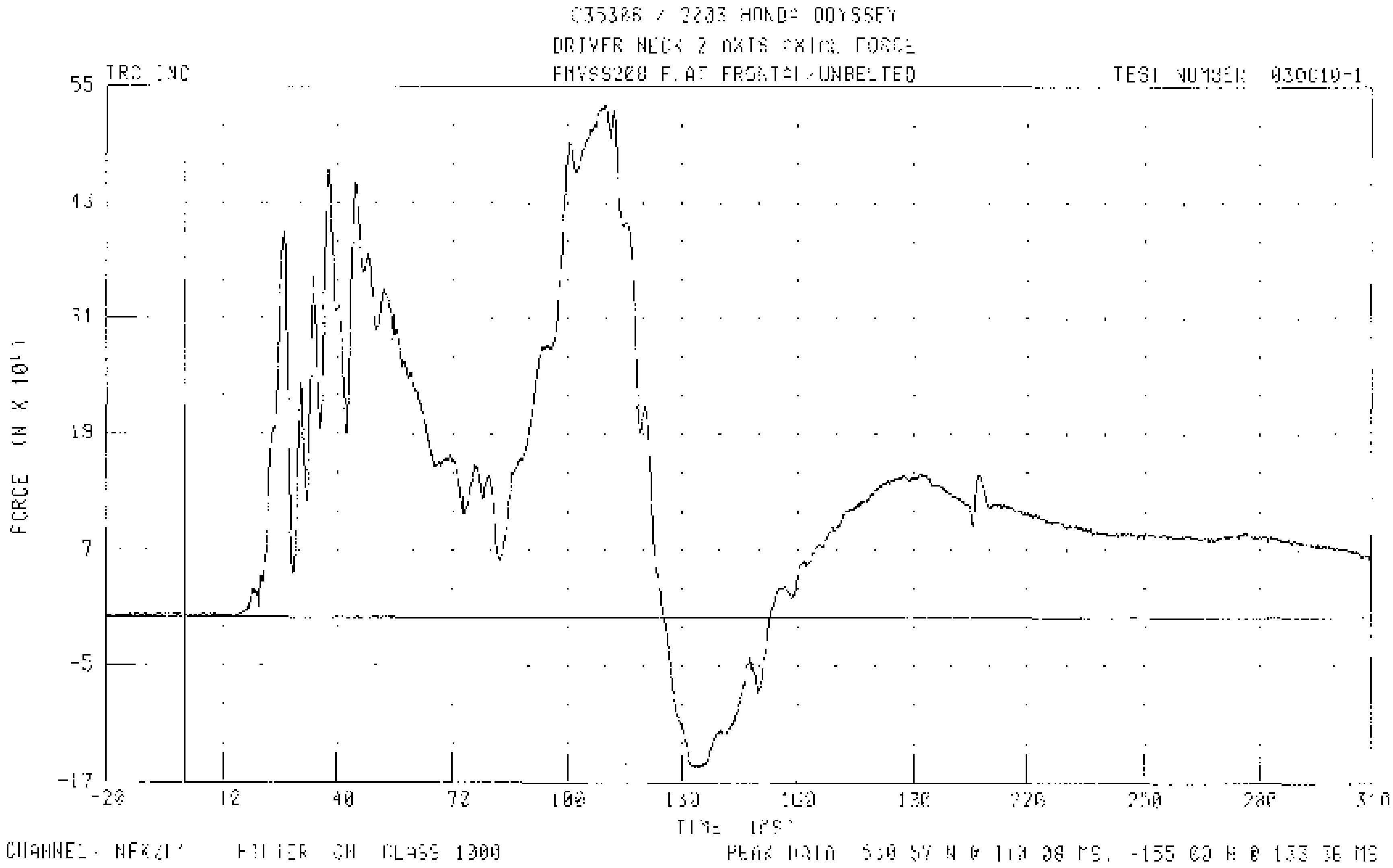
TEST NUMBER 030818-1




133306 / 2003 HONDA ODYSSEY
DRIVER NECK X AXIS SHEAR FORCE
FMVSS208 FLAT FRONTAL/UNBELTED
TRC INC
TEST NUMBER: 030610-1
FORCE (N X 10¹)
30
25
14
3
-8
-19
-30
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL NEKXF1
FILTER: CH CLASS 1000
PEAK DATA: 308.88 N @ 66.08 MS, -276.82 N @ 125.32 MS

C35306 / 2003 HONDA ODYSSEY
DRIVER NECK Y AXIS SHEAR FORCE
FMVSS208 FLAT FRONTAL/UNBELTED





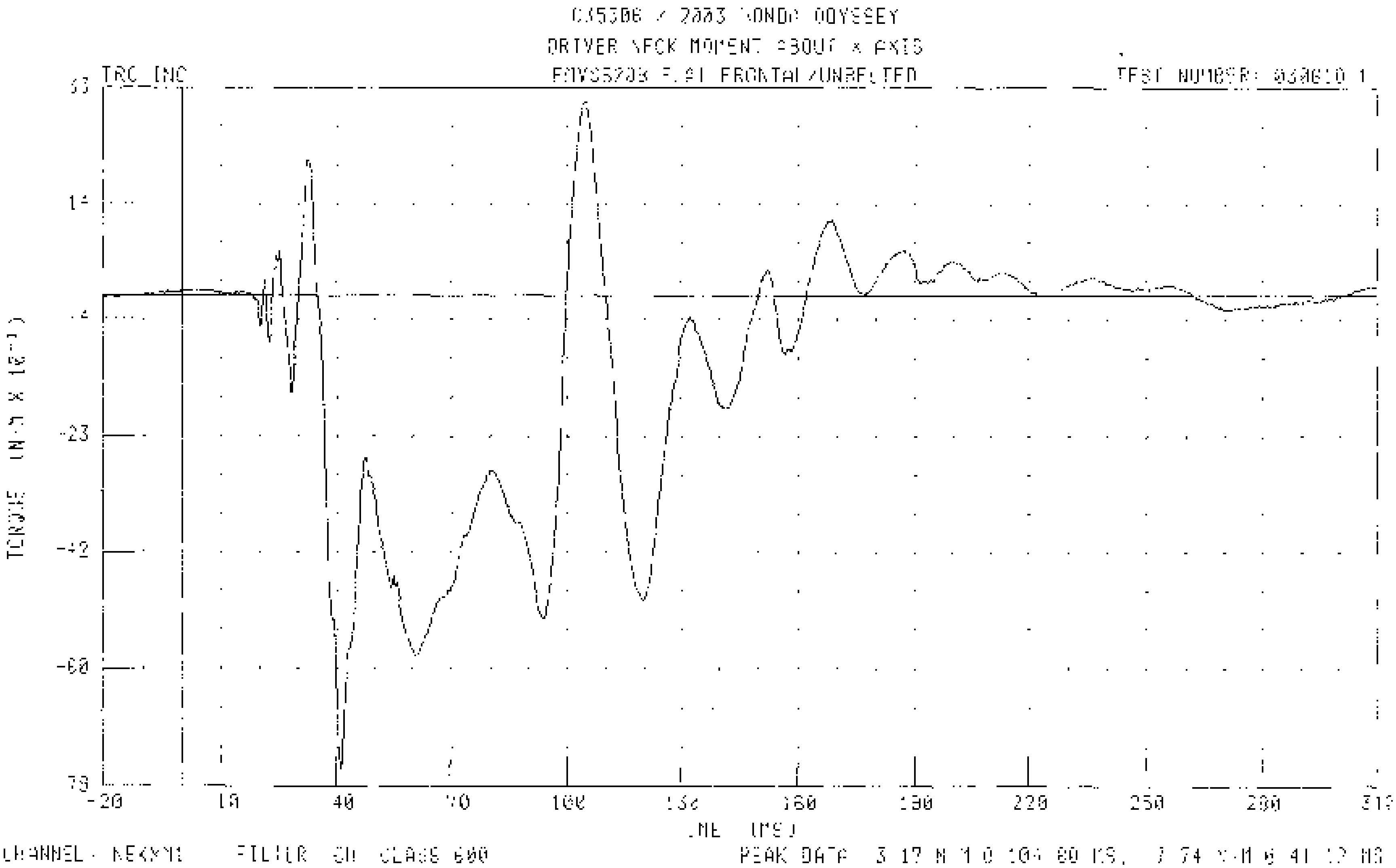
C35386 / 2003 HONDA ODYSSEY

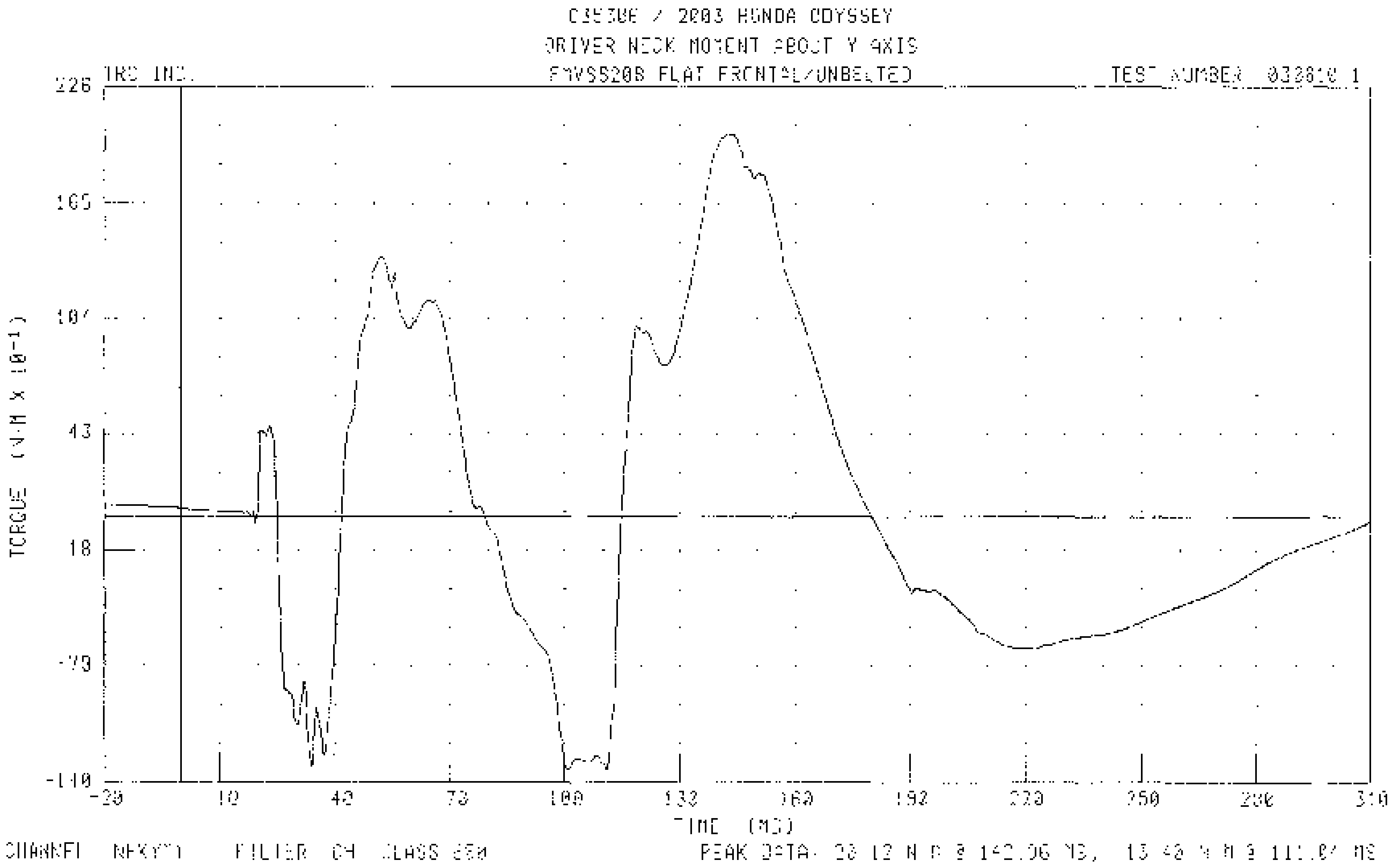
DRIVER NECK Z AXIS AXIAL FORCE

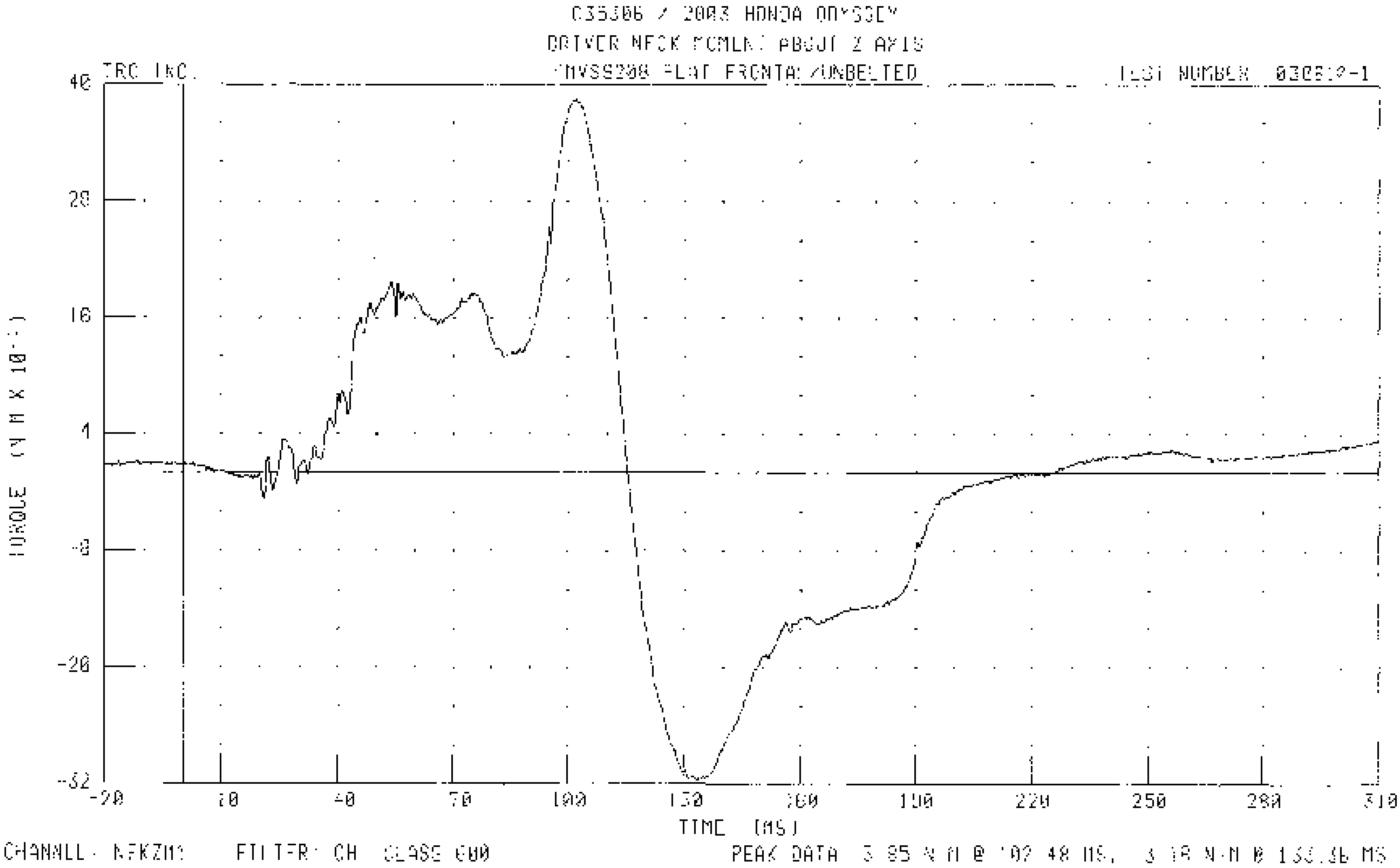
FMVSS208 FLAT FRONTAL/UNBELTED

CHANNEL: NFKZ1'   FILTER: CH CLASS 1000

PEAK DATA: 530.57 N @ 110.08 MS, -155.03 N @ 133.36 MS

C35306 / 2003 HONDA ODYSSEY
DRIVER NECK MOMENT ABOUT X AXIS
FMVSS208 F.01 FRONTAL/UNBELTED
TEST NUMBER: 030610 1
TRC_INC
TORQUE (N-M X 10^-1)
33
14
-4
-23
-42
-60
-79
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NECKMX
FILTER: CH CLASS 600
PEAK DATA 33.17 N-M @ 104.80 MS, -73.74 N-M @ 41.12 MS

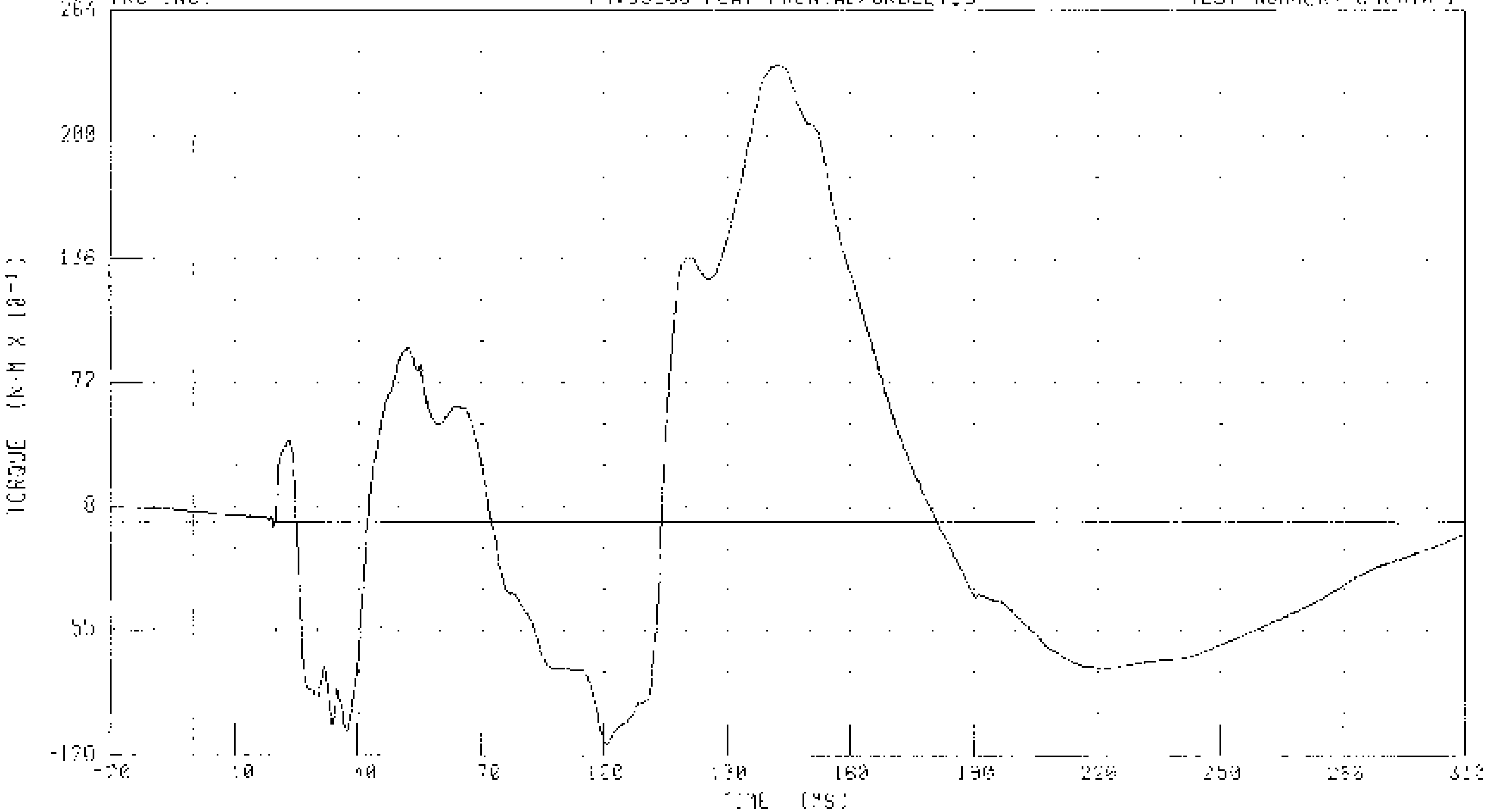

C35308 / 2003 HONDA ODYSSEY
DRIVER NECK MOMENT ABOUT Y AXIS
FMVSS208 FLAT FRONTAL/UNBELTED
TRC INC.
TEST NUMBER 030610 1
TORQUE (N-M X 10-1)
226
165
104
43
18
-79
-140
-20
10
40
70
100
132
160
192
220
250
280
310
TIME (MS)
CHANNEL NFKYM
FILTER CH CLASS 600
PEAK DATA: 20.12 N-M @ 142.06 MS, -13.40 N-M @ 111.04 MS


C35306 / 2003 HONDA ODYSSEY
DRIVER NECK MOMENT ABOUT Z AXIS
FMVSS208 FLAT FRONTAL/UNBELTED
TRC INC.
TEST NUMBER 030512-1
TORQUE (N M X 10⁻¹)
40
28
16
4
-8
-20
-32
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NFKZM1
FILTER: CH CLASS 600
PEAK DATA 3.85 N M @ 102.48 MS, 3.18 N-M @ 133.36 MS

C35206 / 2003 HONDA ODYSSEY

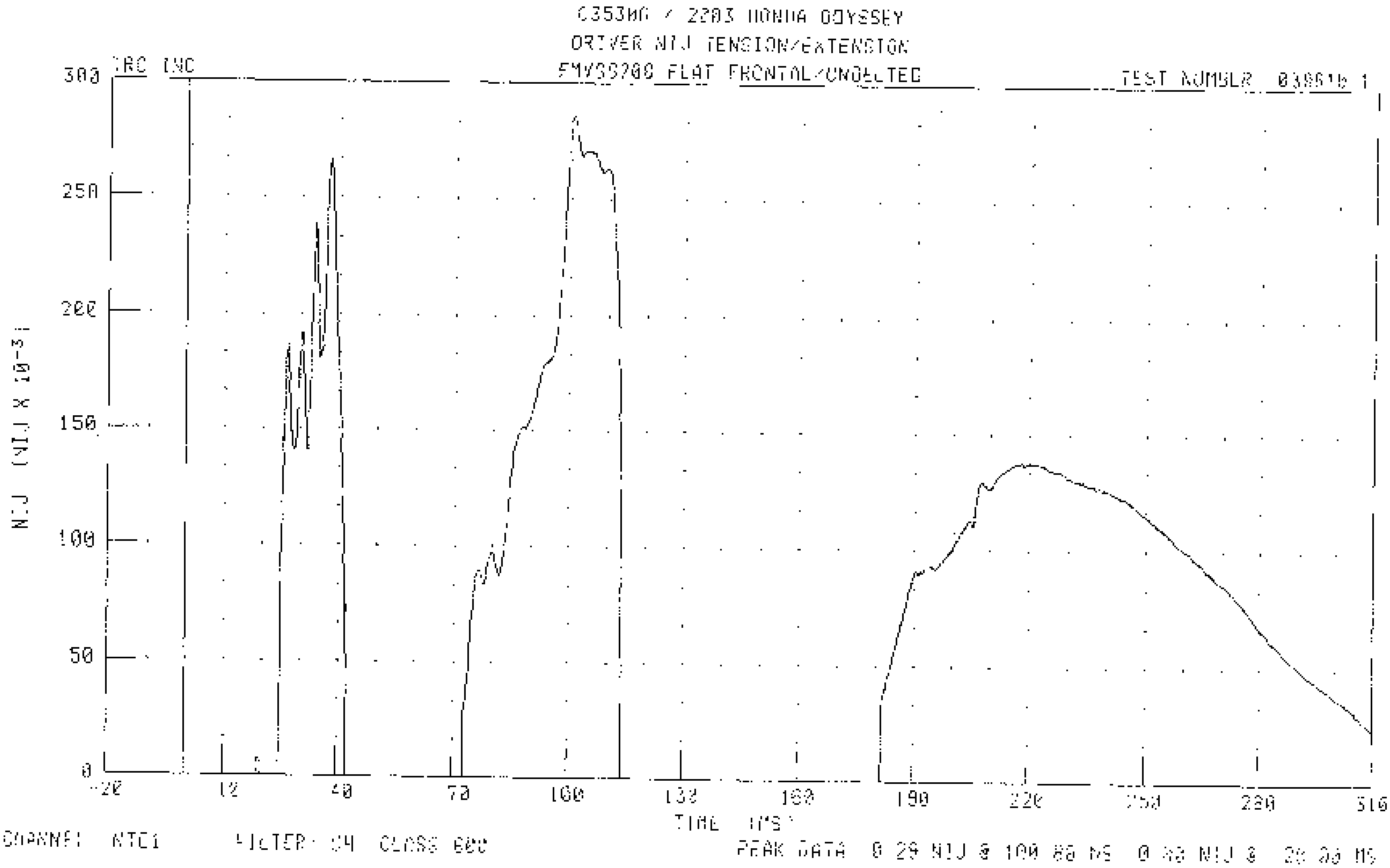
DRIVER NECK MOMENT OCCIPITAL CONDYLE ABOUT Y AXIS

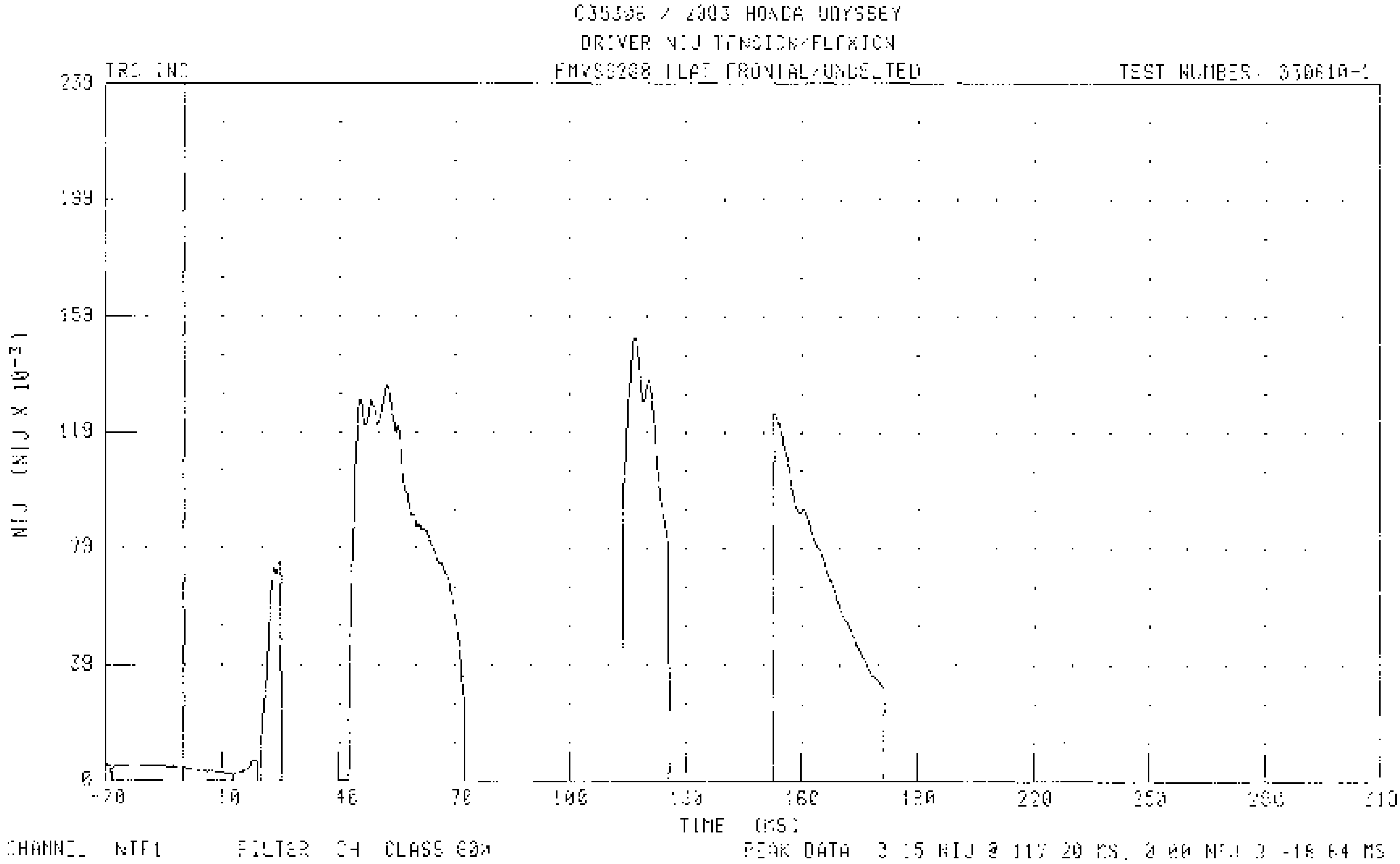
TRC INC. FMVSS208 FLAT FRONTAL/UNBELTED TEST NUMBER: 030610-1

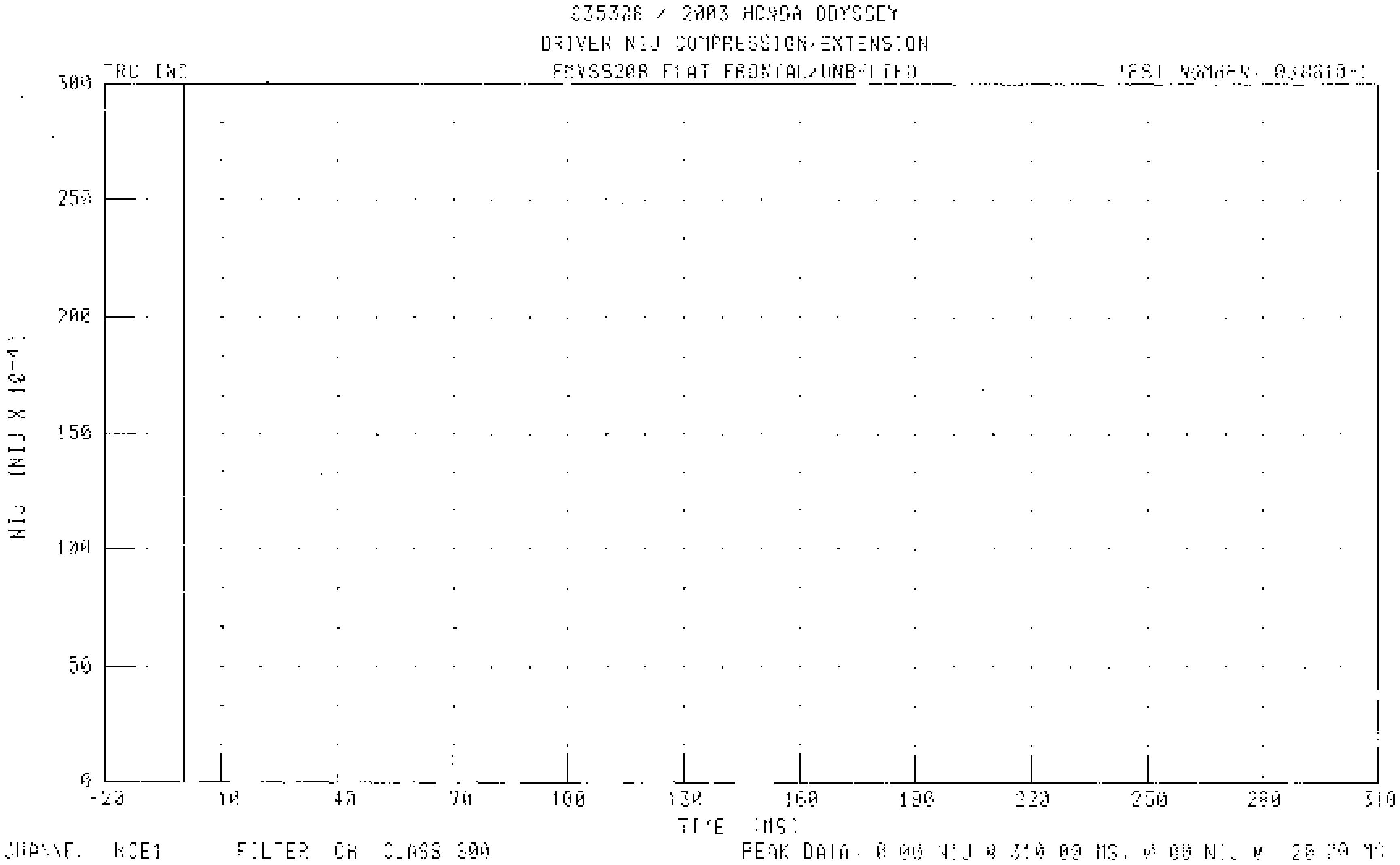


CHANNEL NKOYM1 FILTER CH CLASS 600

PEAK DATA 23.63 N-M @ 142.72 MS, -11.45 N-M @ 100.96 MS


C353MG / 2003 HONDA ODYSSEY
DRIVER NIJ TENSION/EXTENSION
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER 030610 1
TRC INC
300
250
200
150
100
50
0
-20
12
40
70
100
130
160
190
220
250
280
310
TIME (MS)
NIJ (NIJ X 10-3)
CHANNEL NTE1
FILTER CH CLASS 600
PEAK DATA 0.29 NIJ @ 100.86 MS 0.00 NIJ @ 20.06 MS

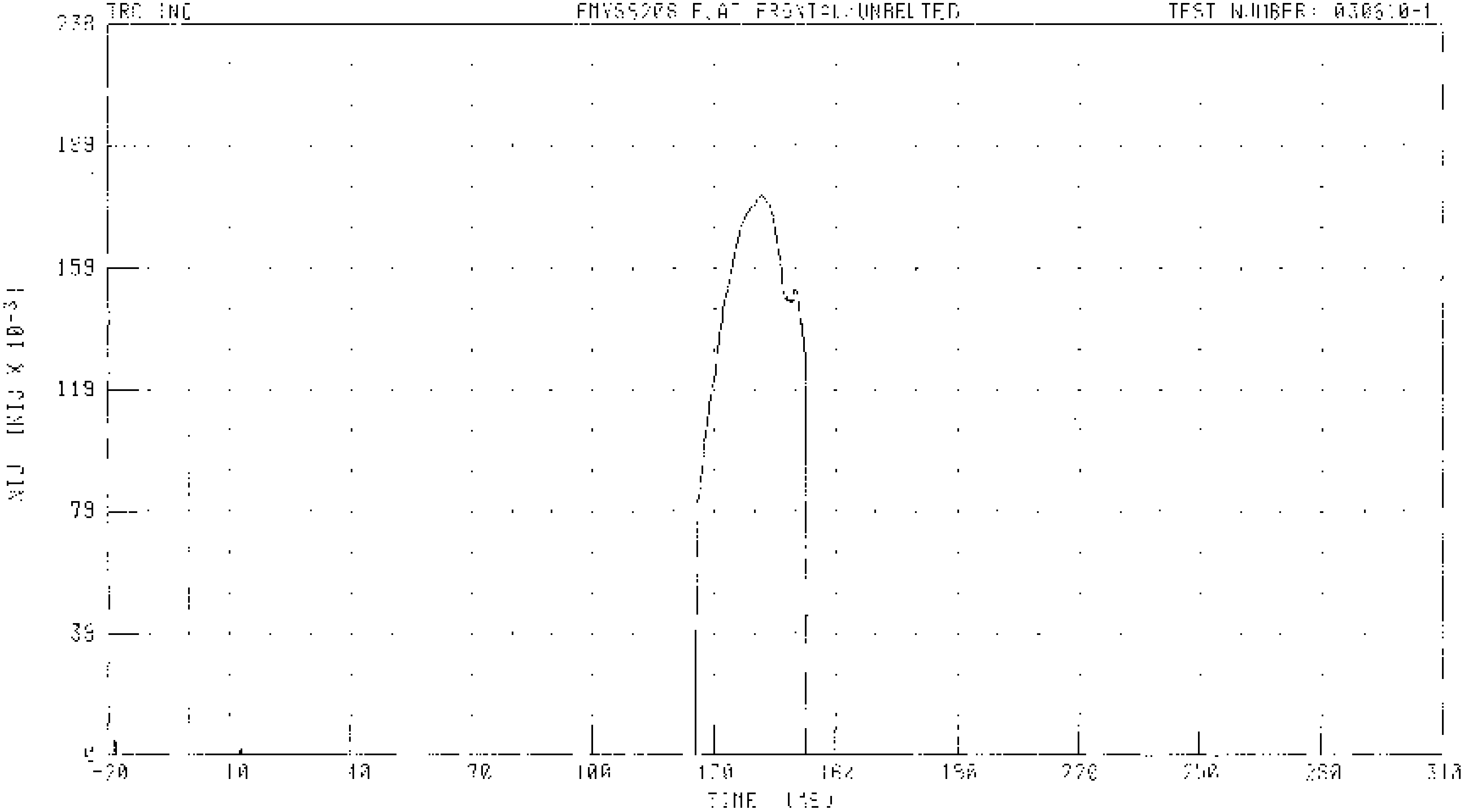

C35306 / 2003 HONDA ODYSSEY
DRIVER NIJ TENSION/FLEXION
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER: 030610-1
TRC INC
239
199
159
119
79
39
0
NIJ (NIJ X 10-3)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL NTF1
FILTER CH CLASS 600
PEAK DATA 0.15 NIJ @ 117.20 MS, 0.00 NIJ @ -18.64 MS


035328 / 2003 HONDA ODYSSEY
DRIVER NIJ COMPRESSION/EXTENSION
FMVSS208 FLAT FRONTAL/UNBELTED
TRC INC
TEST NUMBER: 030610-1
NIJ (NIJ X 10-1)
300
250
200
150
100
50
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NCE1
FILTER: CH CLASS 600
PEAK DATA: 0.00 NIJ @ 310.00 MS, 0.00 NIJ @ -20.00 MS

C35306 / 2003 HONDA ODYSSEY
DRIVER NIJ COMPRESSION/FLEXION
FMVSS208 FLAT FRONTAL/UNBELTED

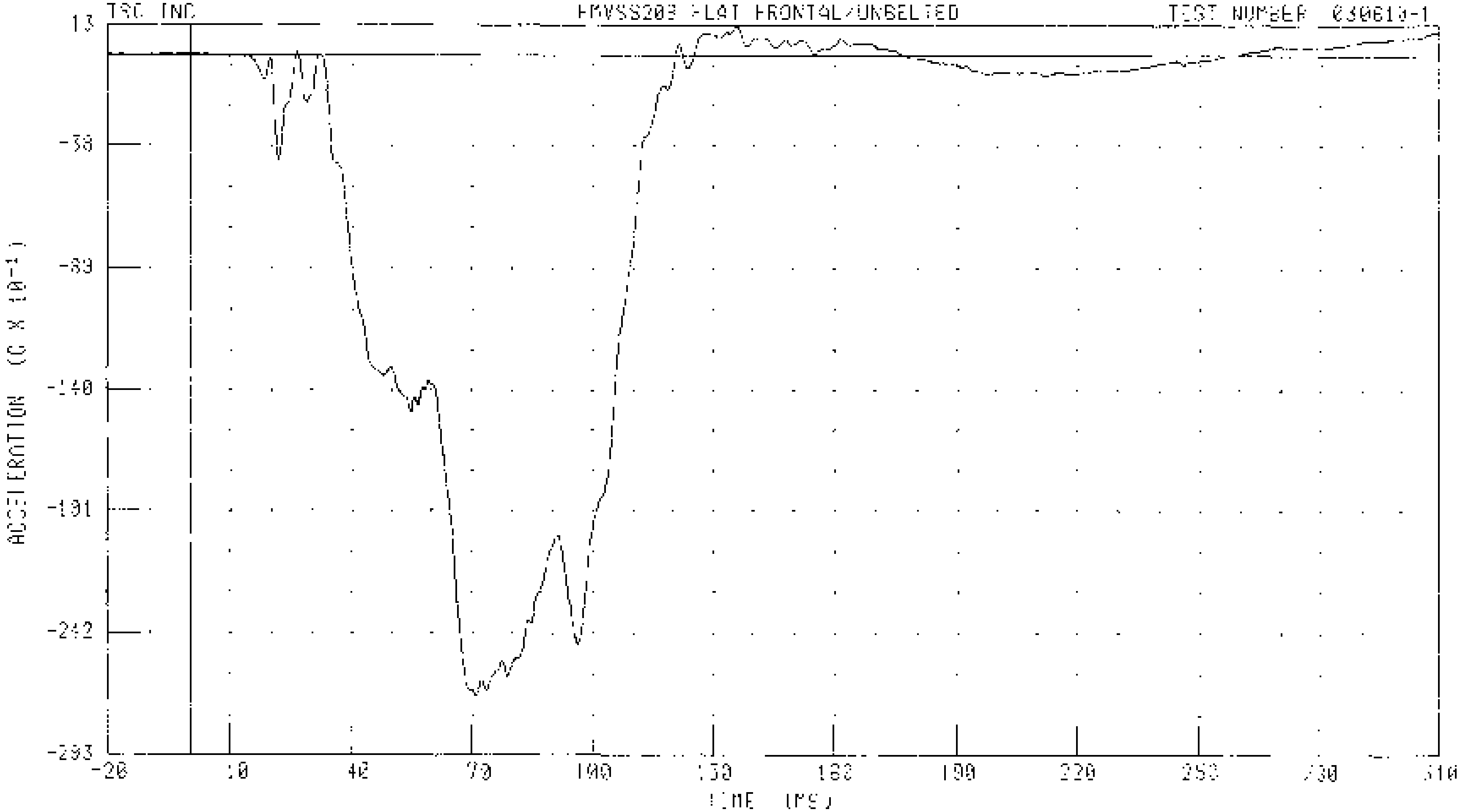
TRC INC

TEST NUMBER: 030610-1



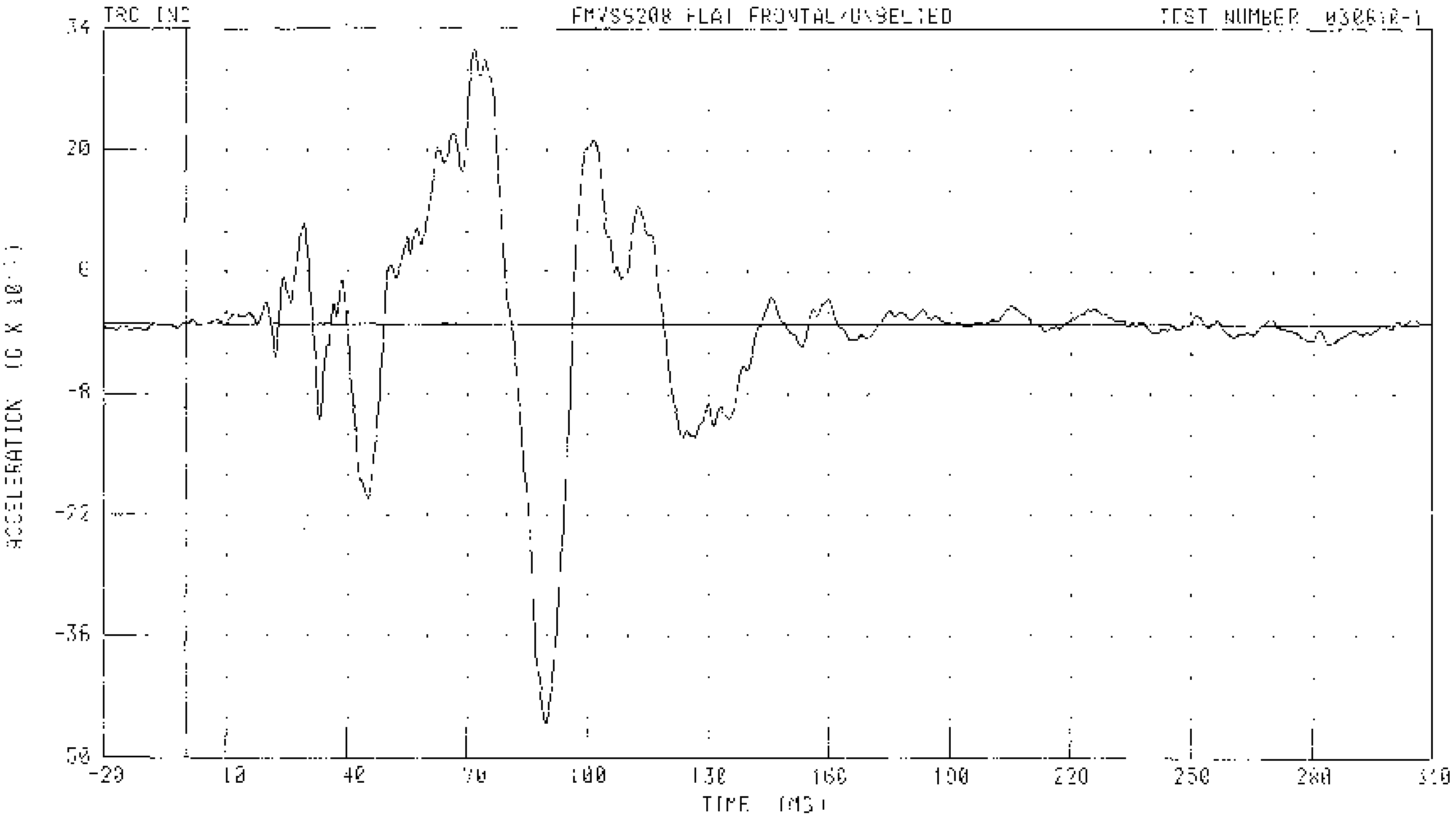
CHANNEL NCF   FILTER CH CLASS 600   PEAK DATA 0.18 NIJ @ 141.92 MS, 0.00 NIJ @ -20.22 MS

C35306 / 2003 HONDA ODYSSEY
DRIVER CHEST X-AXIS ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED

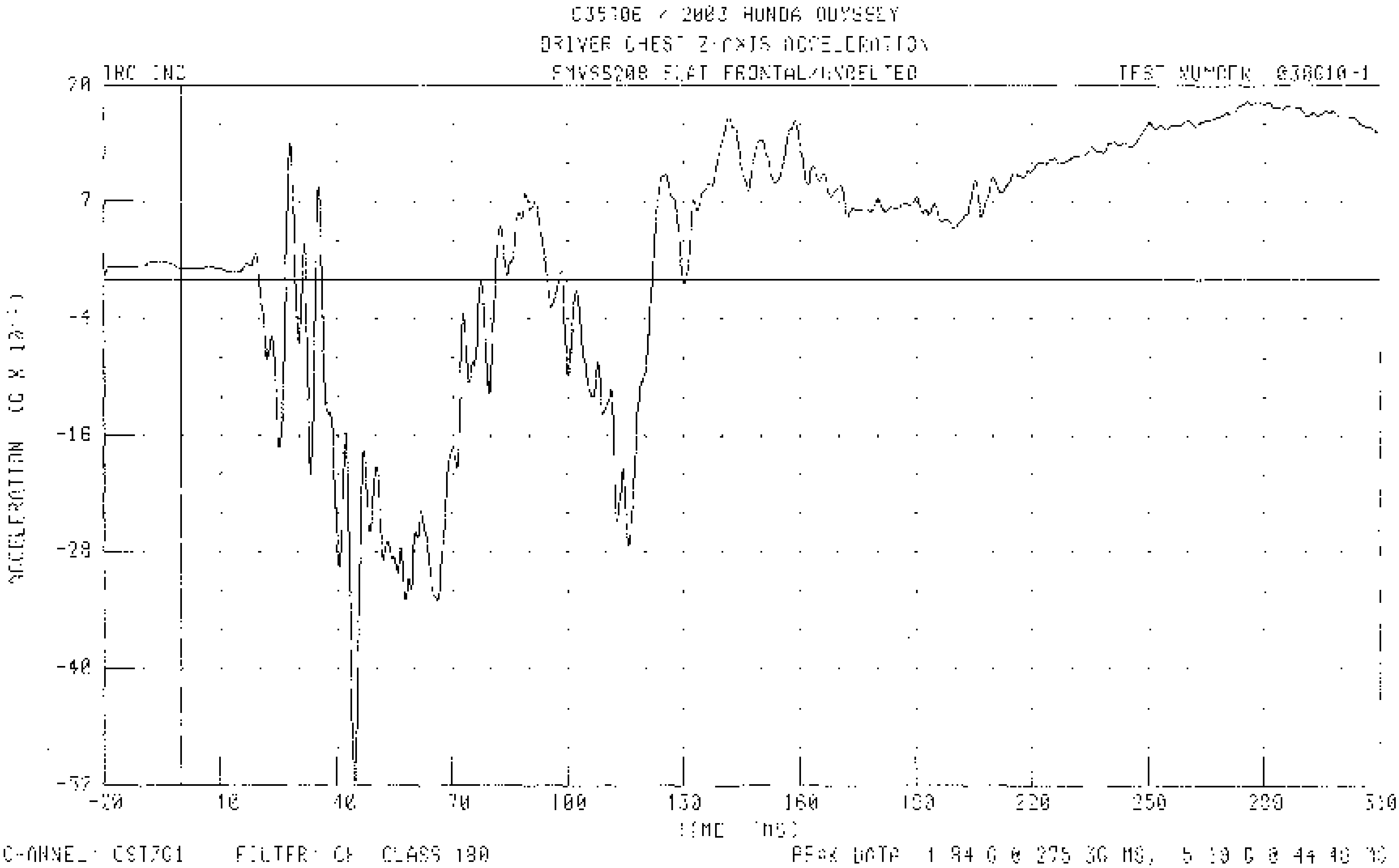


CHANNEL CSTXG1 FILTER CH CLASS 180 PEAK DATA 1.23 G @ 135.84 MS, -26.86 G @ 71.12 MS

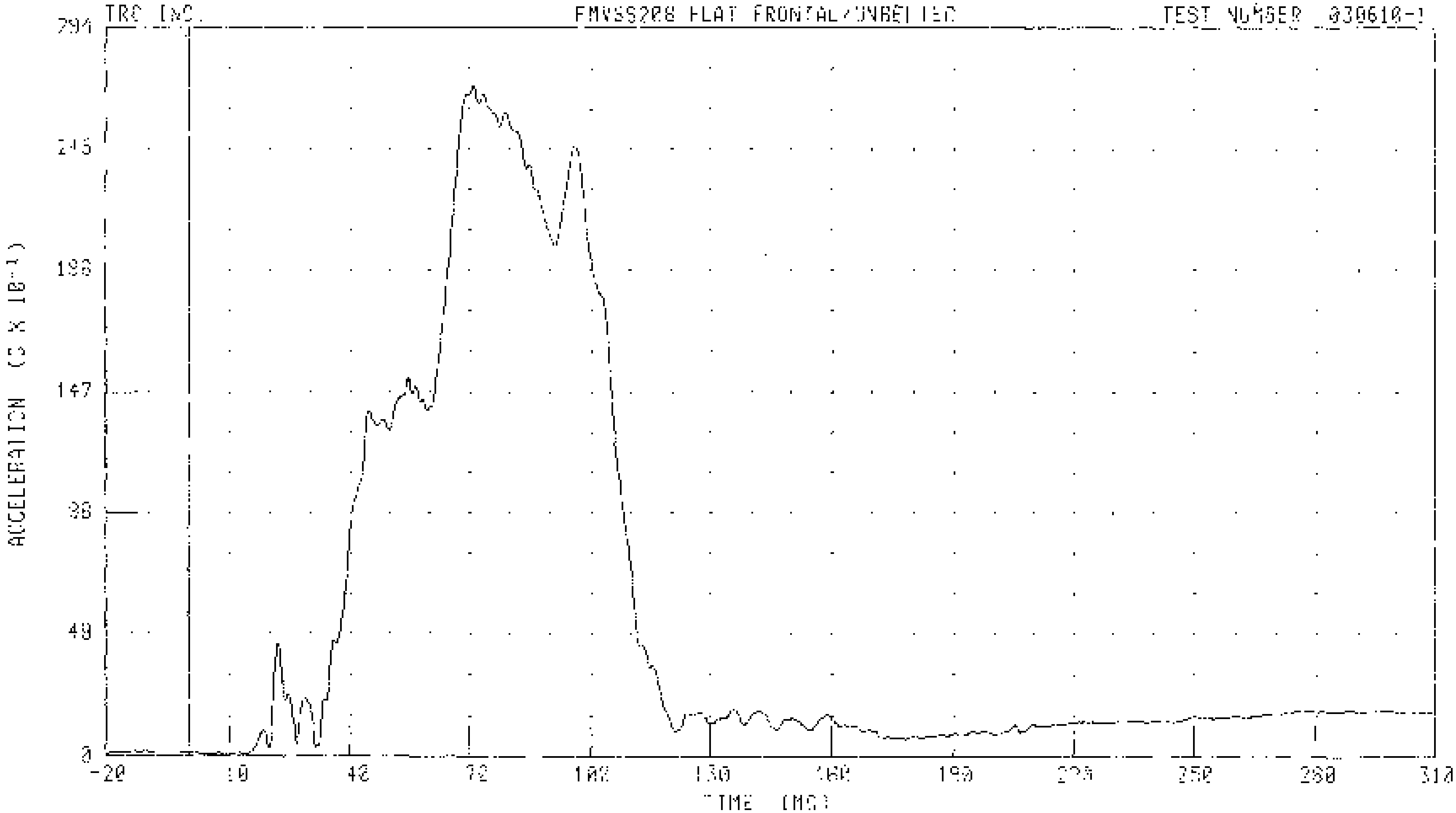
C35300 / 2003 HONDA ODYSSEY
DRIVER CHEST Y-AXIS ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER 030610-1



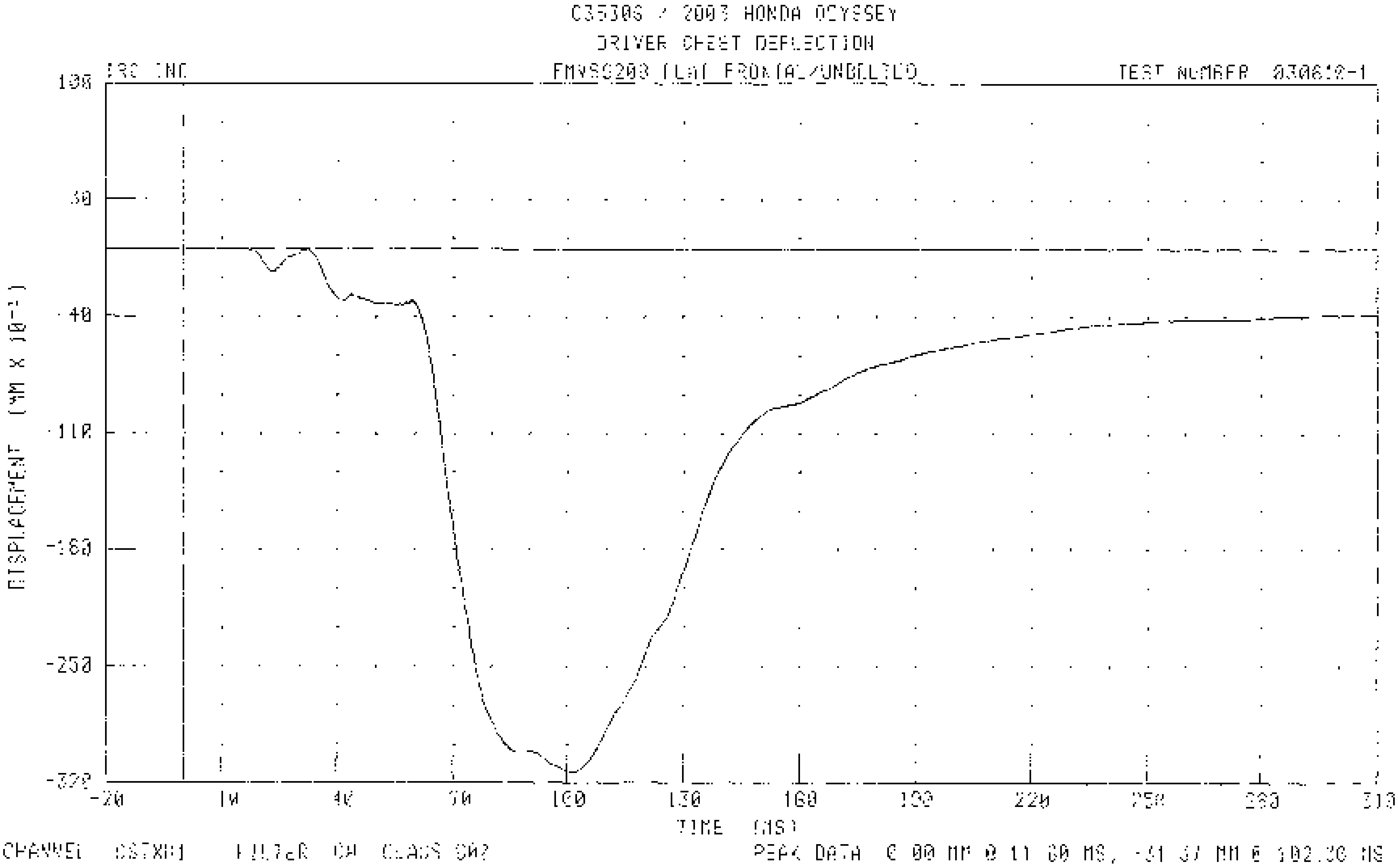
CHANNEL CSTYC1   FILTER CP CLASS 180   PEAK DATA 3.16 G @ 71.84 MS, 4.02 G @ 89.84 MS


C3570E / 2003 HONDA ODYSSEY
DRIVER CHEST Z-AXIS ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED
TRC INC
TEST NUMBER 030610-1
ACCELERATION (G X 10-1)
20
7
-4
-16
-28
-40
-52
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CST7C1
FILTER: CF CLASS 180
PEAK DATA 1.94 G @ 275.30 MS, 5.10 G @ 44.40 MS

C35306 / 2003 HONDA ODYSSEY
DRIVER CHEST RESULTANT ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED

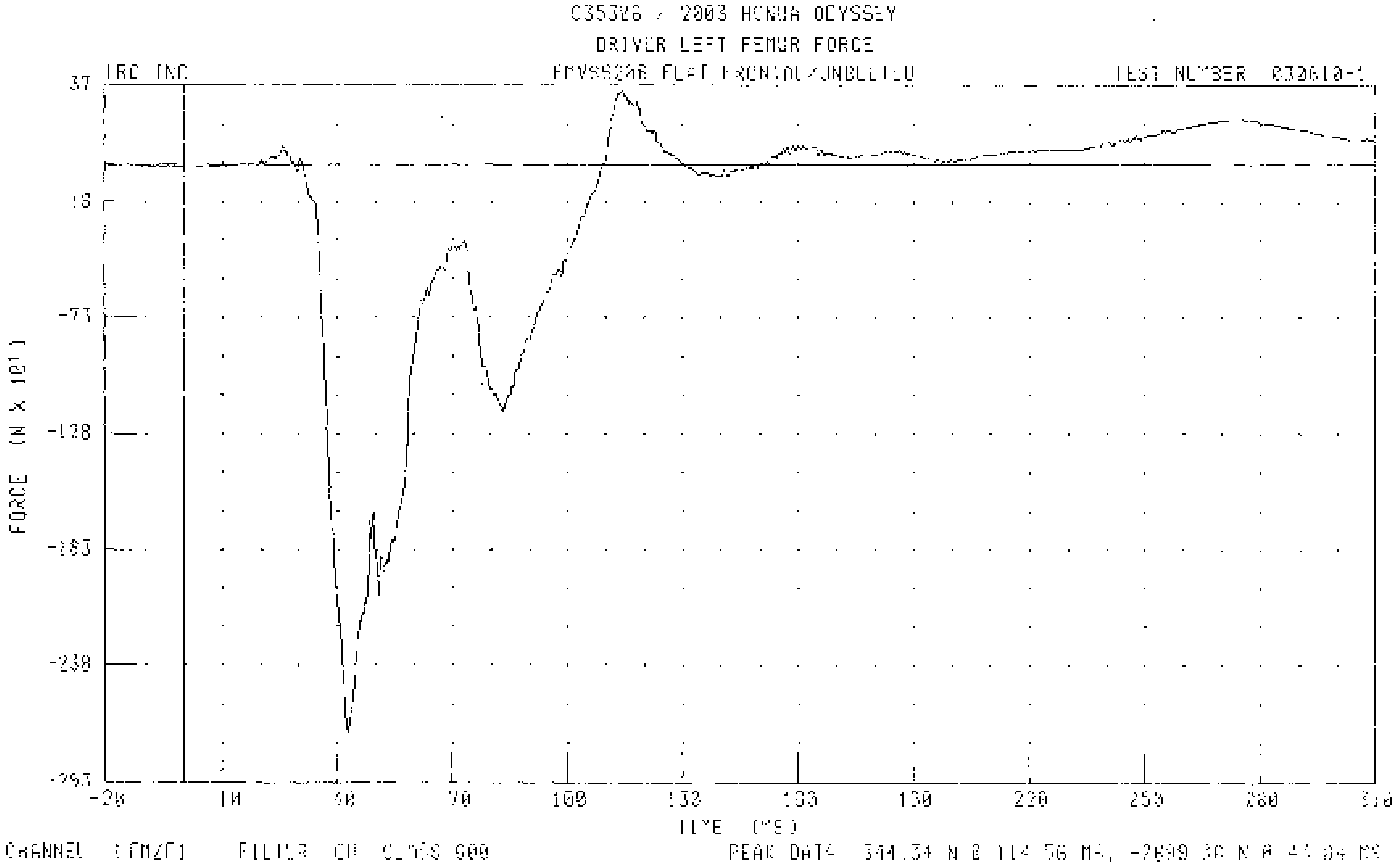


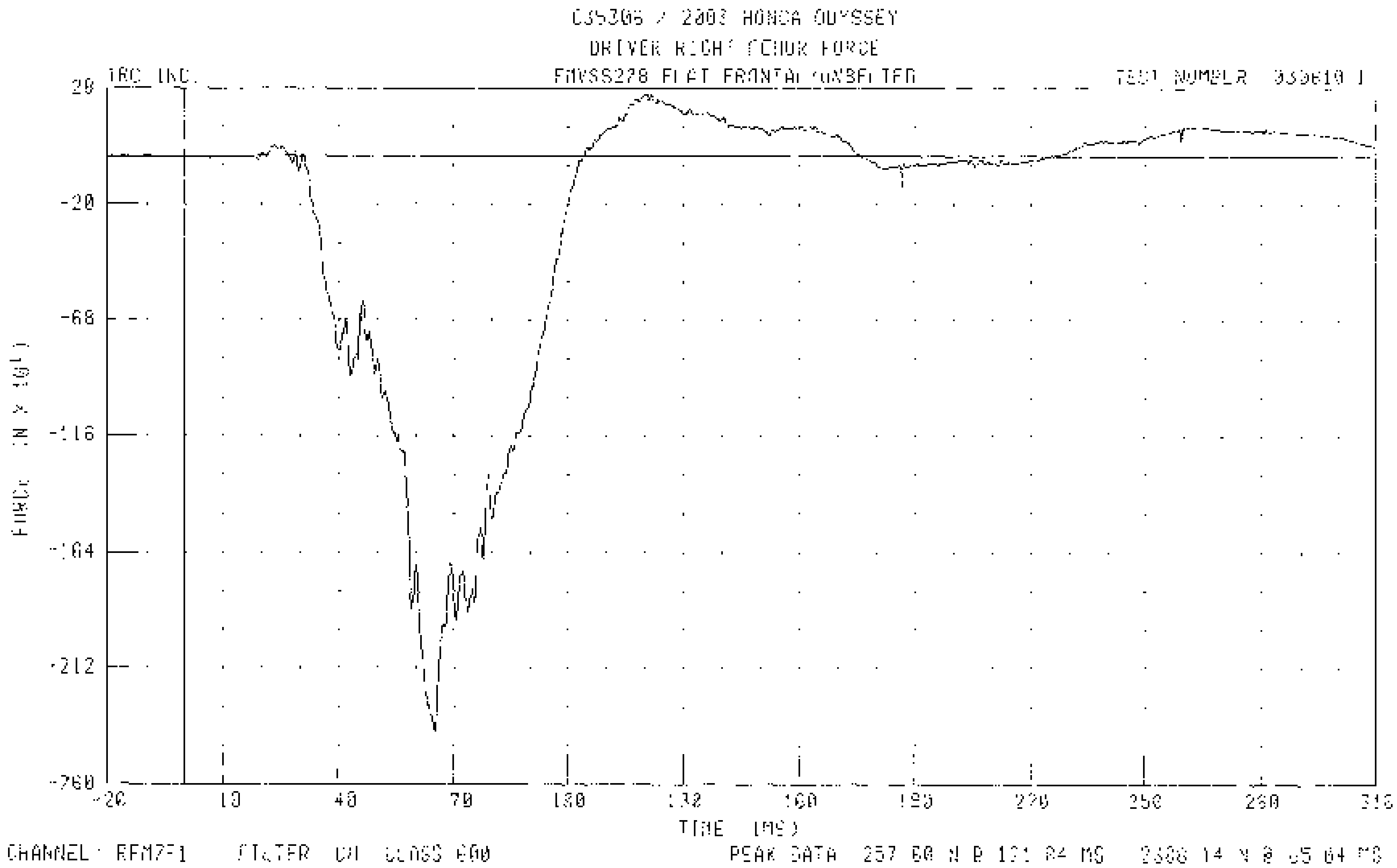
CHANNEL: CS1RCH FILTER: CH CLASS 180 PEAK DATA 27.09 G @ 72.17 MS, -0.01 G @ -20.00 MS

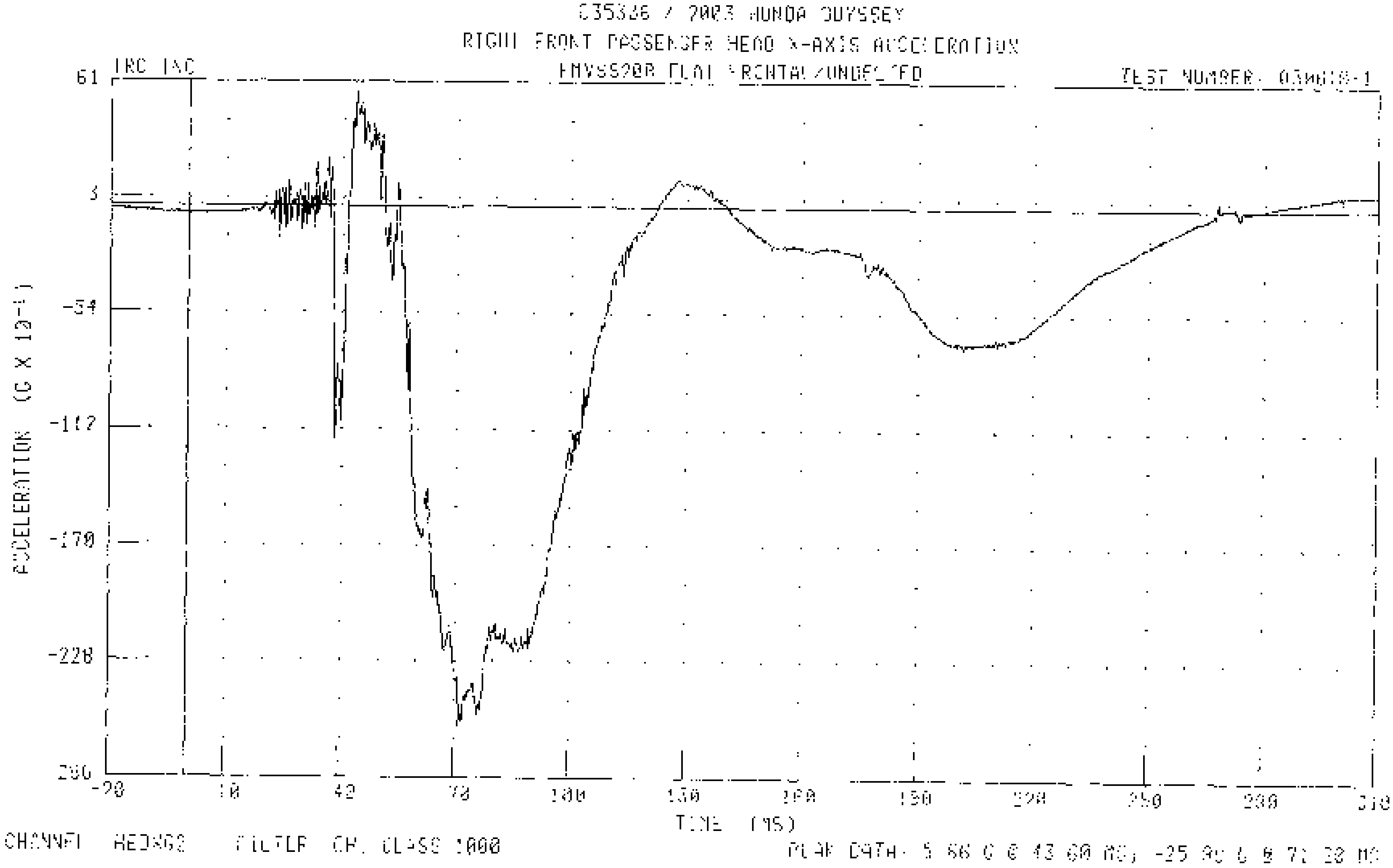


C3530S / 2003 HONDA ODYSSEY
DRIVER CHEST DEFLECTION
FMVSS208 (LAT FRONTAL/UNBELTED)

CHANNEL CSTXH1 FILTER CH CLASS 600 PEAK DATA 0.00 MM @ 11.60 MS, -31.37 MM @ 102.30 MS


C35326 / 2003 HONDA ODYSSEY
DRIVER LEFT FEMUR FORCE
TRC INC
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER 030610-1
FORCE (N X 10¹)
37
-18
-73
-128
-183
-238
-293
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL LFMZF1
FILTER CH CLASS 600
PEAK DATA 344.34 N @ 114.56 MS, -2899.30 N @ 44.04 MS


C35306 / 2003 HONDA ODYSSEY
DRIVER RIGHT FEMUR FORCE
FMVSS208 FLAT FRONTAL UNBELTED
TRC INC.
TEST NUMBER 030610 1
20
-20
-68
-116
-164
-212
-260
FORCE (N X 10^1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: RFM7F1
FILTER: CFC CLASS 600
PEAK DATA: 257.60 N @ 121.04 MS -2608.14 N @ 65.04 MS

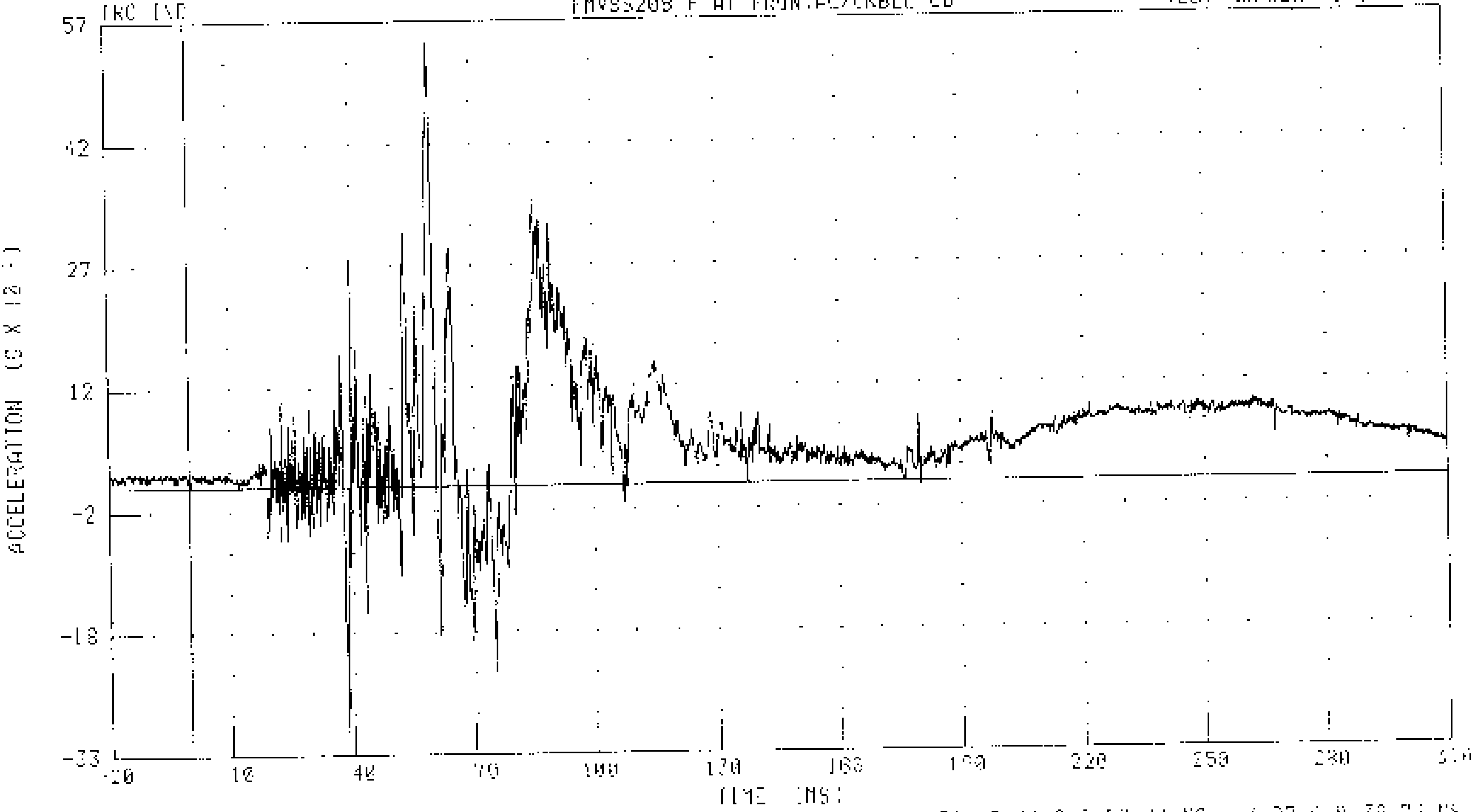

C35306 / 2003 HONDA ODYSSEY
RIGHT FRONT PASSENGER HEAD X-AXIS ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER: 030610-1
TRC INC
61
3
-54
-112
-170
-228
-286
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL HEDXG2
FILTER CH. CLASS 1000
PEAK DATA: 5.66 G @ 43.60 MS; -25.90 G @ 71.30 MS

035306 / 2003 HONDA ODYSSEY

RIGHT FRONT PASSENGER HEAD Y-AXIS ACCELERATION

FMVSS208 FLAT FRONTAL/UNBELTED

TEST NUMBER 030610-1

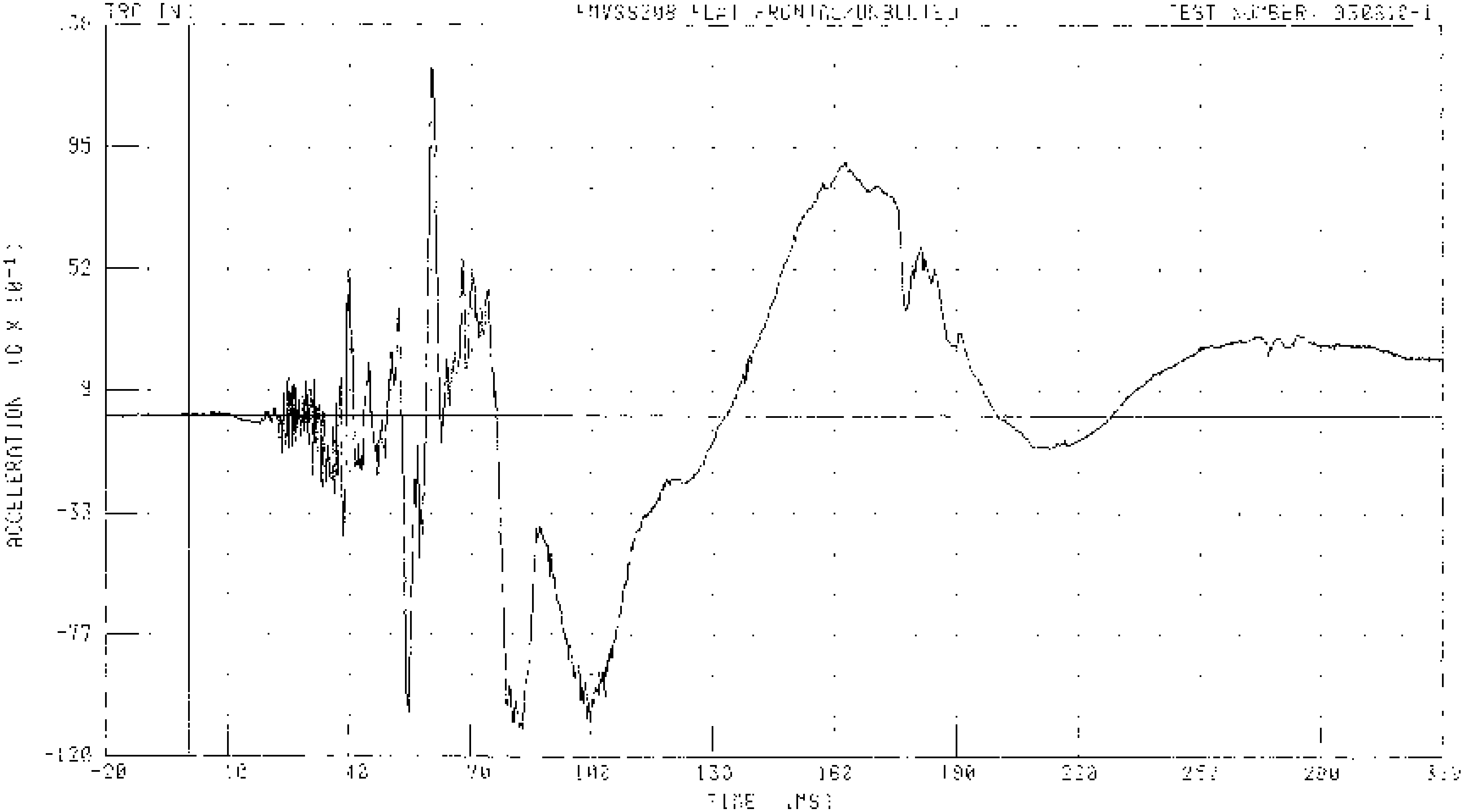


PEAK DATA: 5.44 G @ 58.44 MS, -3.07 G @ 38.72 MS

CHANNEL HEDYC2 FILTER CH CLASS 1000

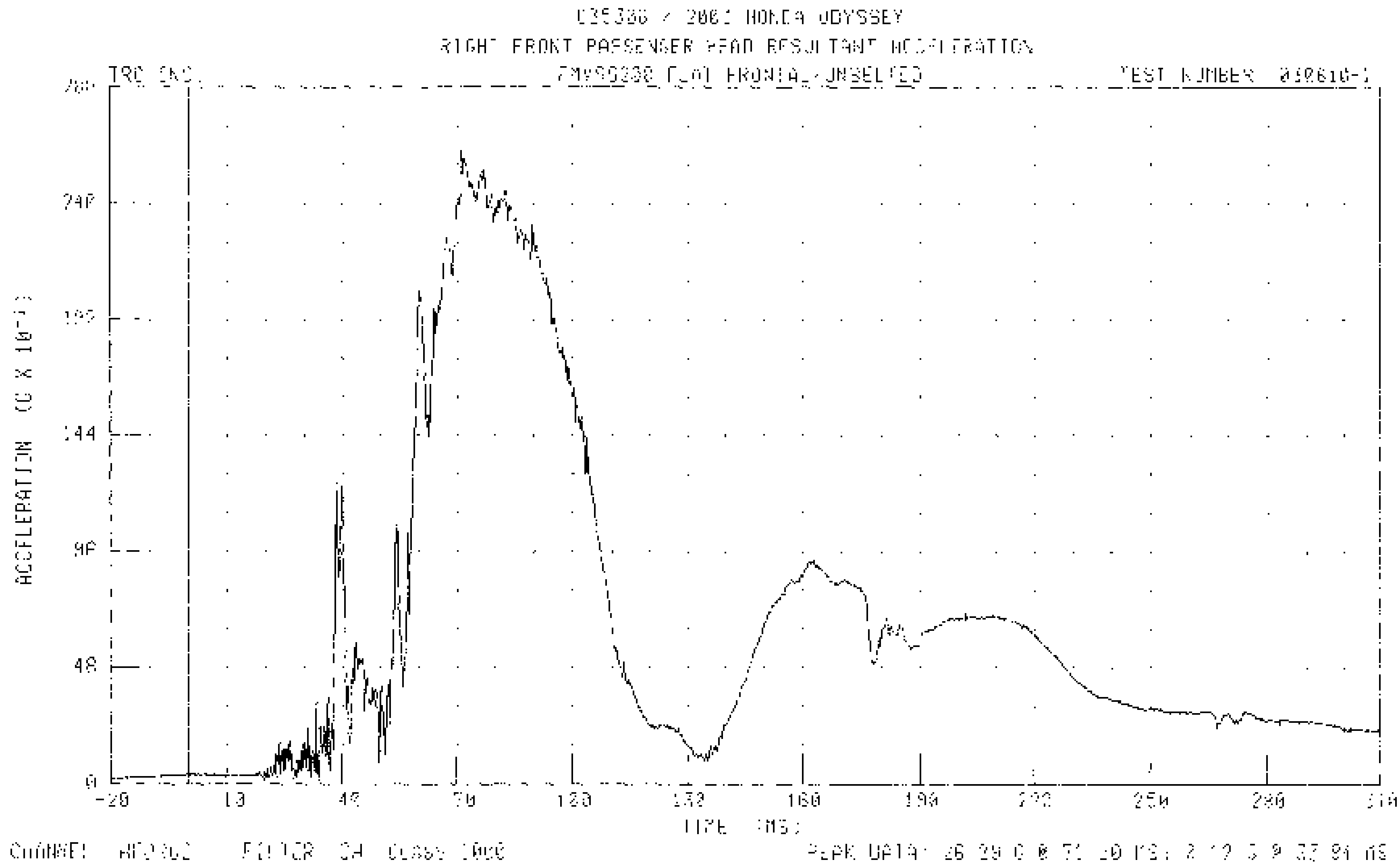
C35306 / 2003 HONDA ODYSSEY
RIGHT FRONT PASSENGER HEAD Z-AXIS ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED

TEST NUMBER: 030610-1



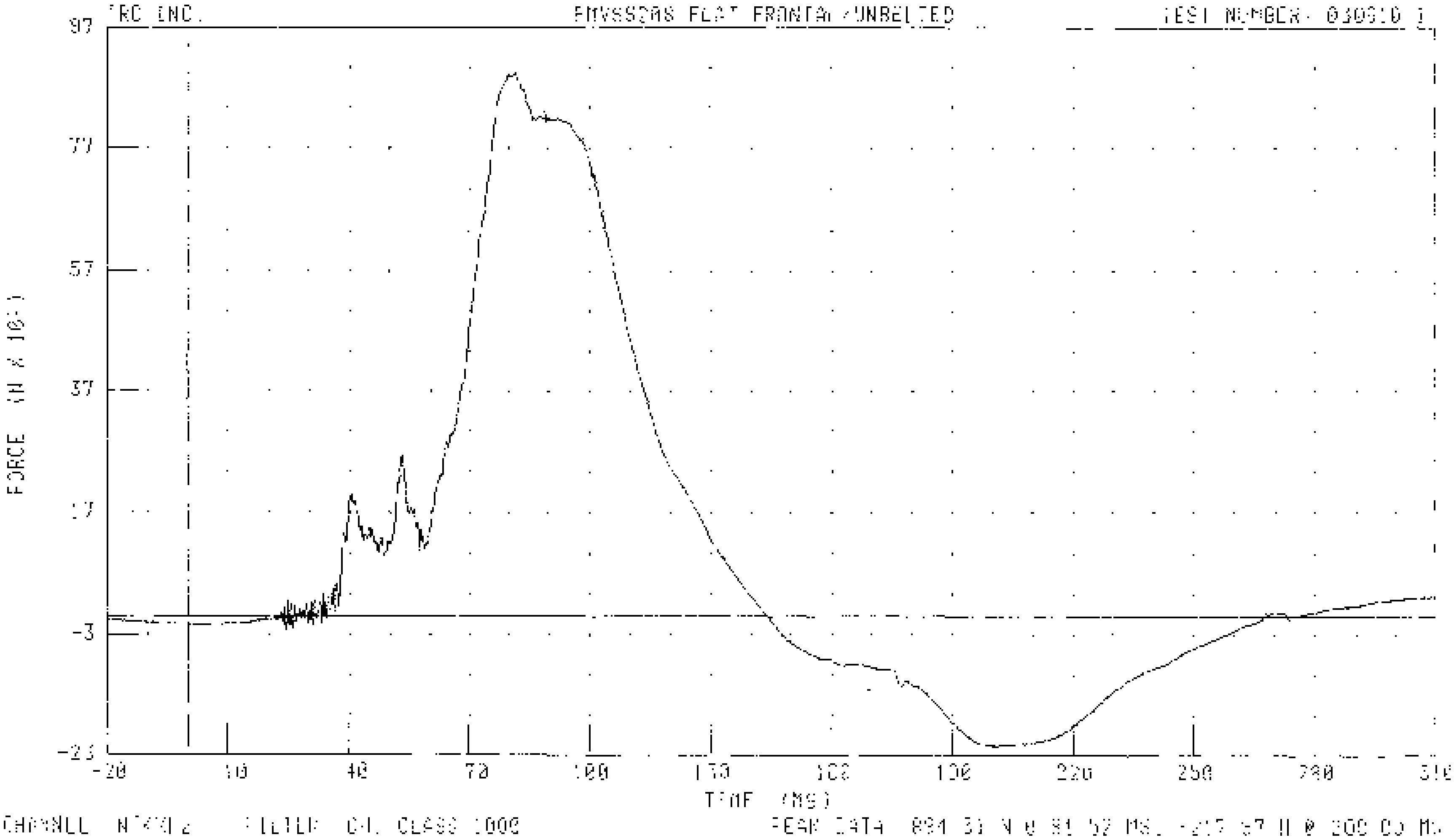
CHANNEL H-D202 FILTER CH CLASS 1000

PEAK DATA 12.35 G @ 59.40 MS, -11.16 G @ 82.58 MS


035386 / 2001 HONDA ODYSSEY
RIGHT FRONT PASSENGER HEAD RESULTANT ACCELERATION
TRC INC.
7MY05030 [_40] FRONTAL / UNBELTED
TEST NUMBER 030610-1
288
240
192
144
96
48
0
ACCELERATION (G X 10^-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL HF0302 FILTER CH CLASS 1000
PEAK DATA: 26.29 G @ 71.20 MS; 2.12 G @ 37.84 MS

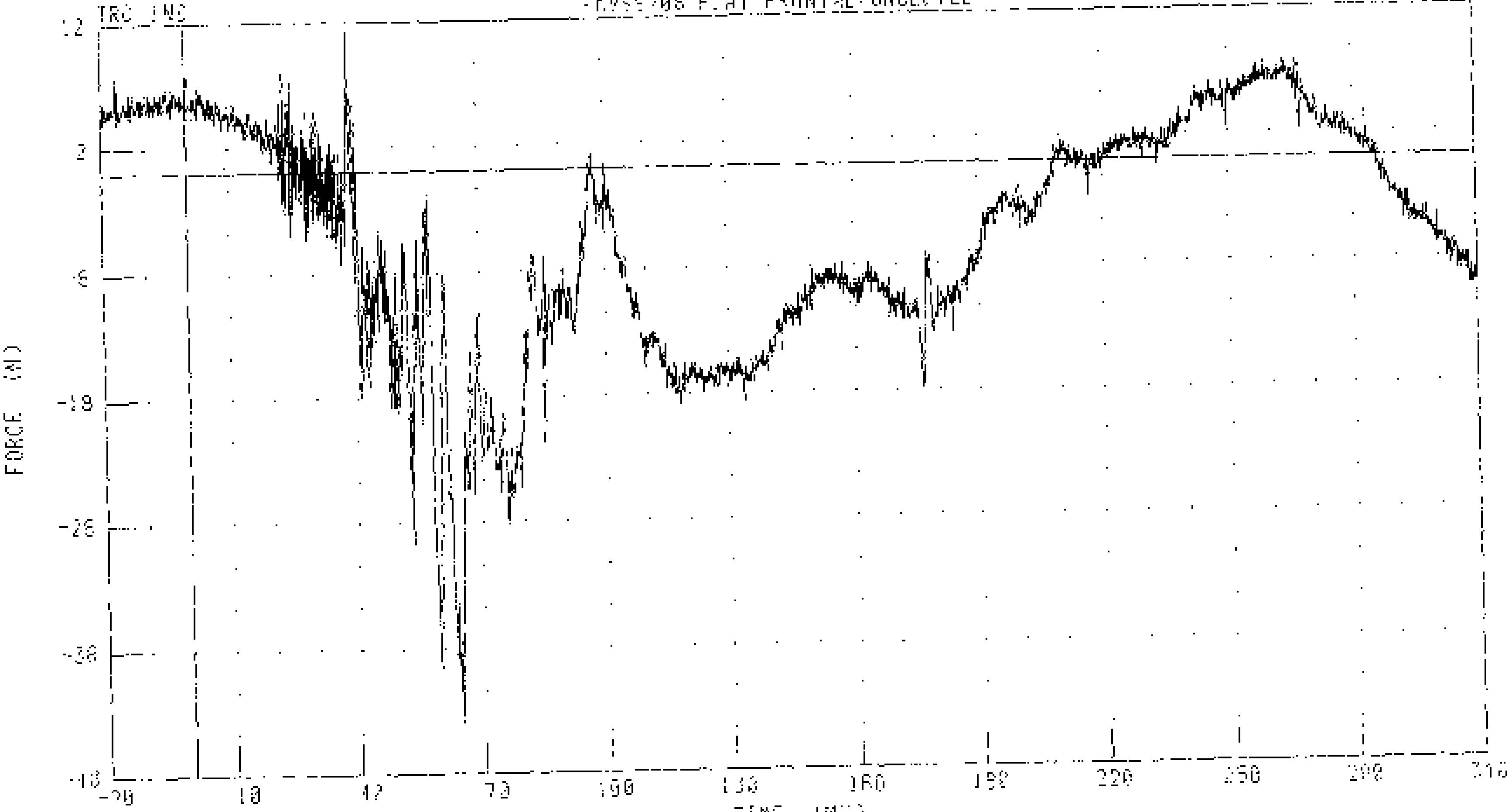
C3530E / 2003 HONDA ODYSSEY

RIGHT FRONT PASSENGER NECK X-AXIS SHEAR FORCE



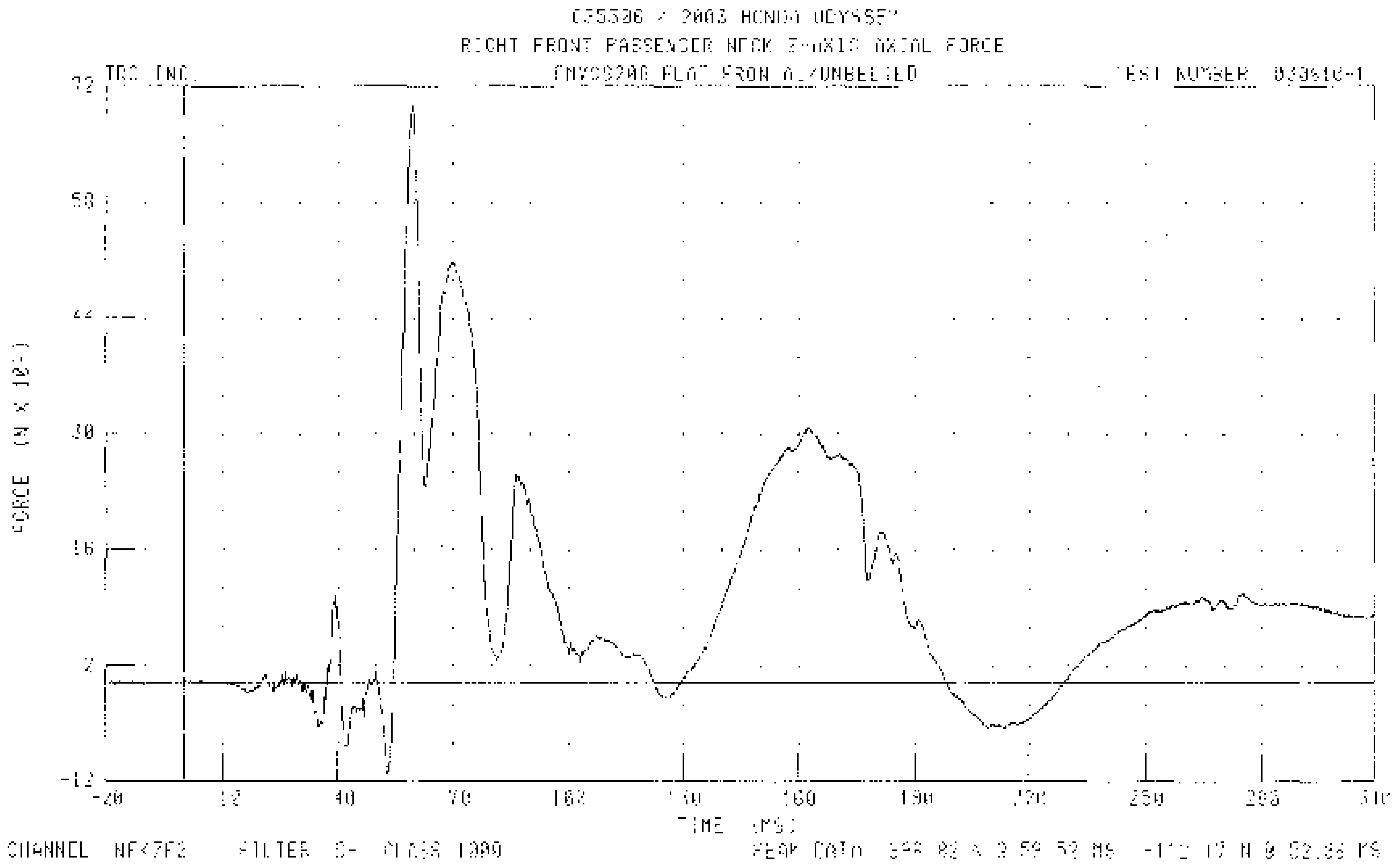
C5530A / 2003 HONDA ODYSSEY
RIGHT FRONT PASSENGER NECK Y-AXIS SHEAR FORCE
FMVSS208 FLAT FRONTAL/UNBELTED

TEST NUMBER 030612-1



CHANNEL NFKYFZ FILTER: CH CLASS 1000

PEAK DATA 11.33 N @ 38.80 MS -44.04 N @ 64.64 MS

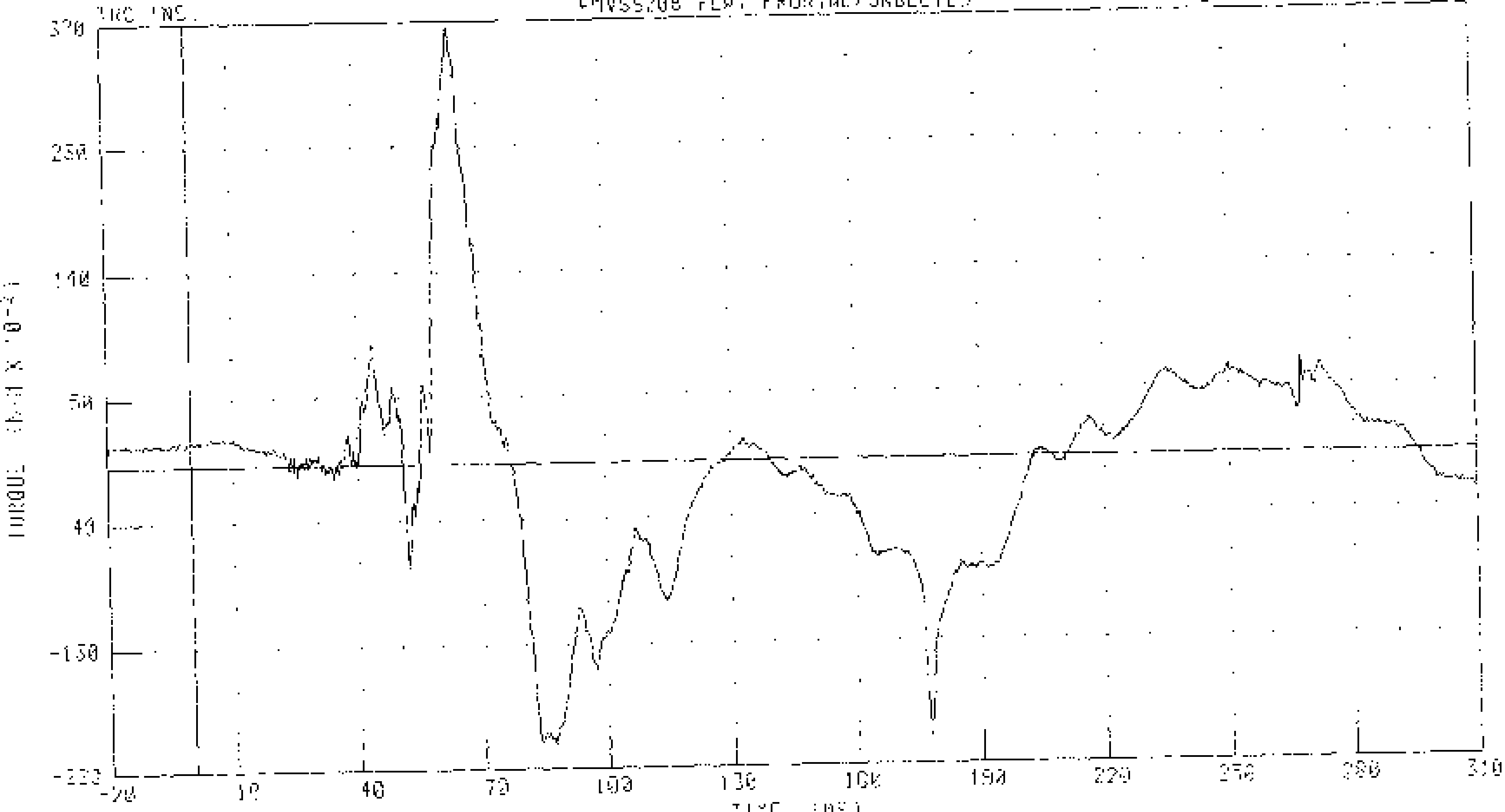

C05306 / 2003 HONDA ODYSSEY
RIGHT FRONT PASSENGER NECK Z-AXIS AXIAL FORCE
TRC INC.
ENV0520Q FLAT FRON 0./UNBELTED
TEST NUMBER 030610-1
72
58
44
30
16
2
-12
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL NF<7F2
FILTER C- CLASS 1000
PEAK DATA [illegible] N @ 59.52 MS -112.17 N @ 52.36 MS

C35308 / 2007 HONDA ODYSSEY

RIGHT FRONT PASSENGER NECK MOMENT ABOUT X AXIS

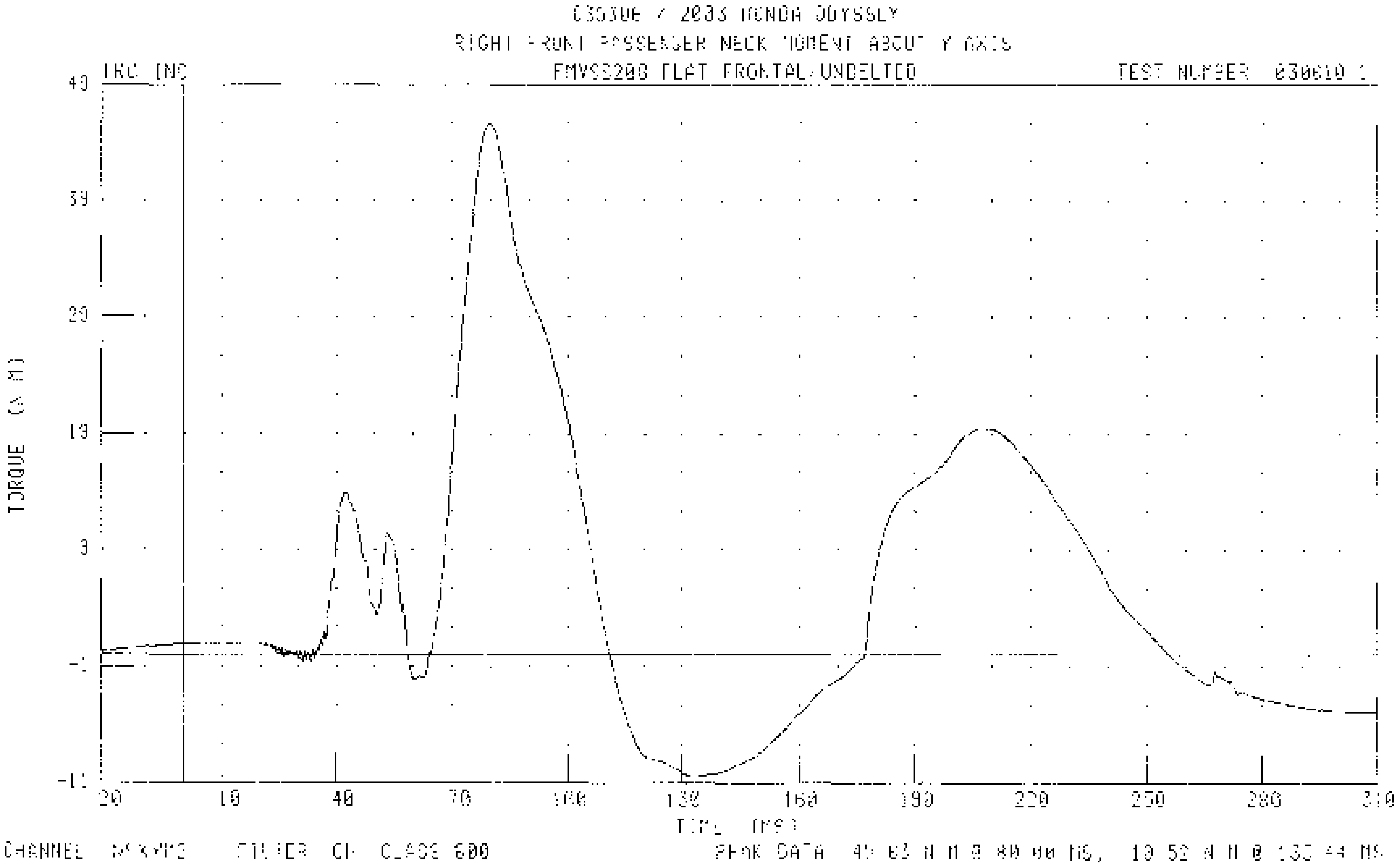
FMVSS208 FLAT FRONTAL/UNBELTED

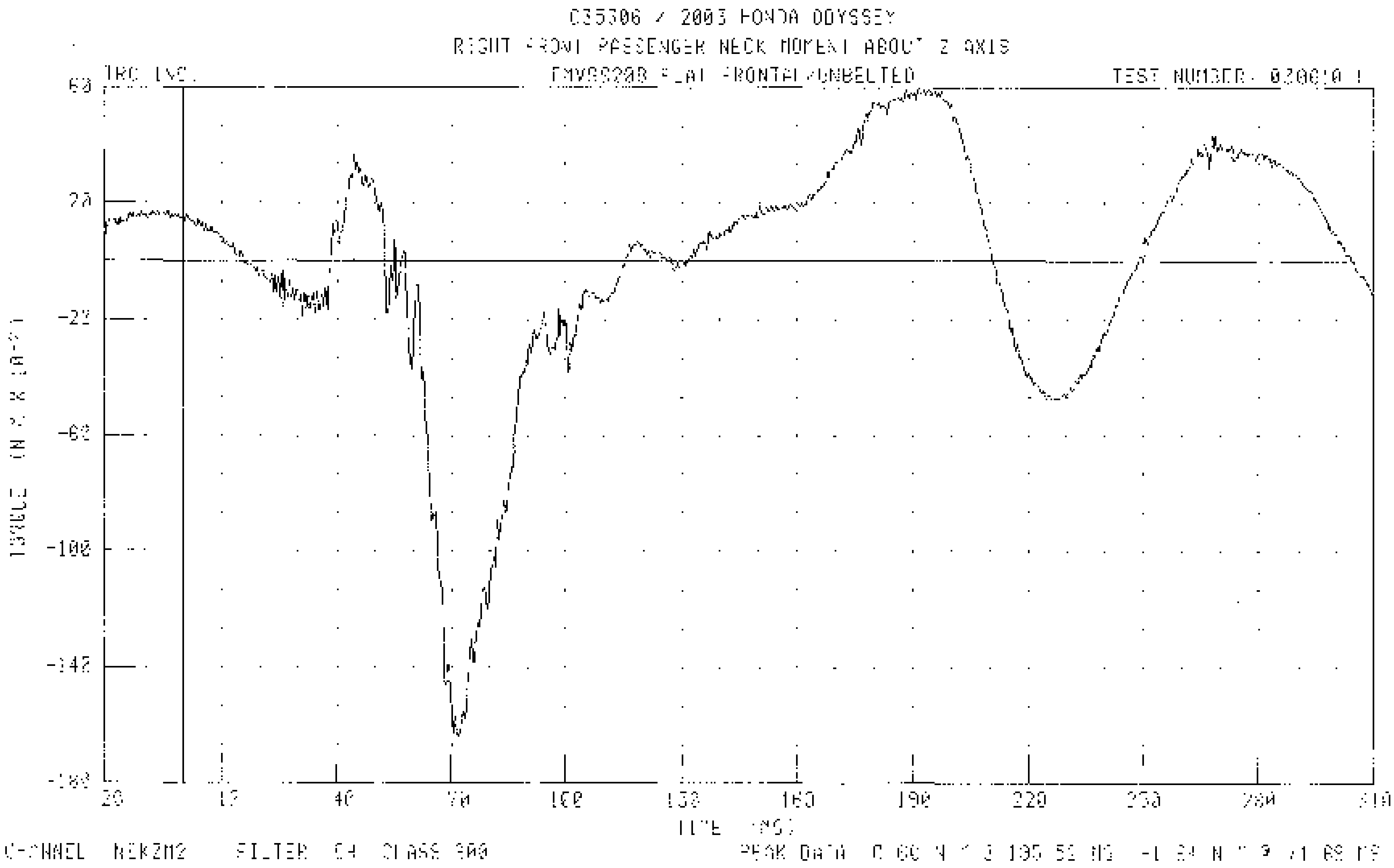
TEST NUMBER 030610-1



PEAK DATA: 3.16 N-M @ 63.09 MS; -2.07 N-M @ 80.96 MS

CHANNEL: NEKMXY FILTER: CH. CLASS 600

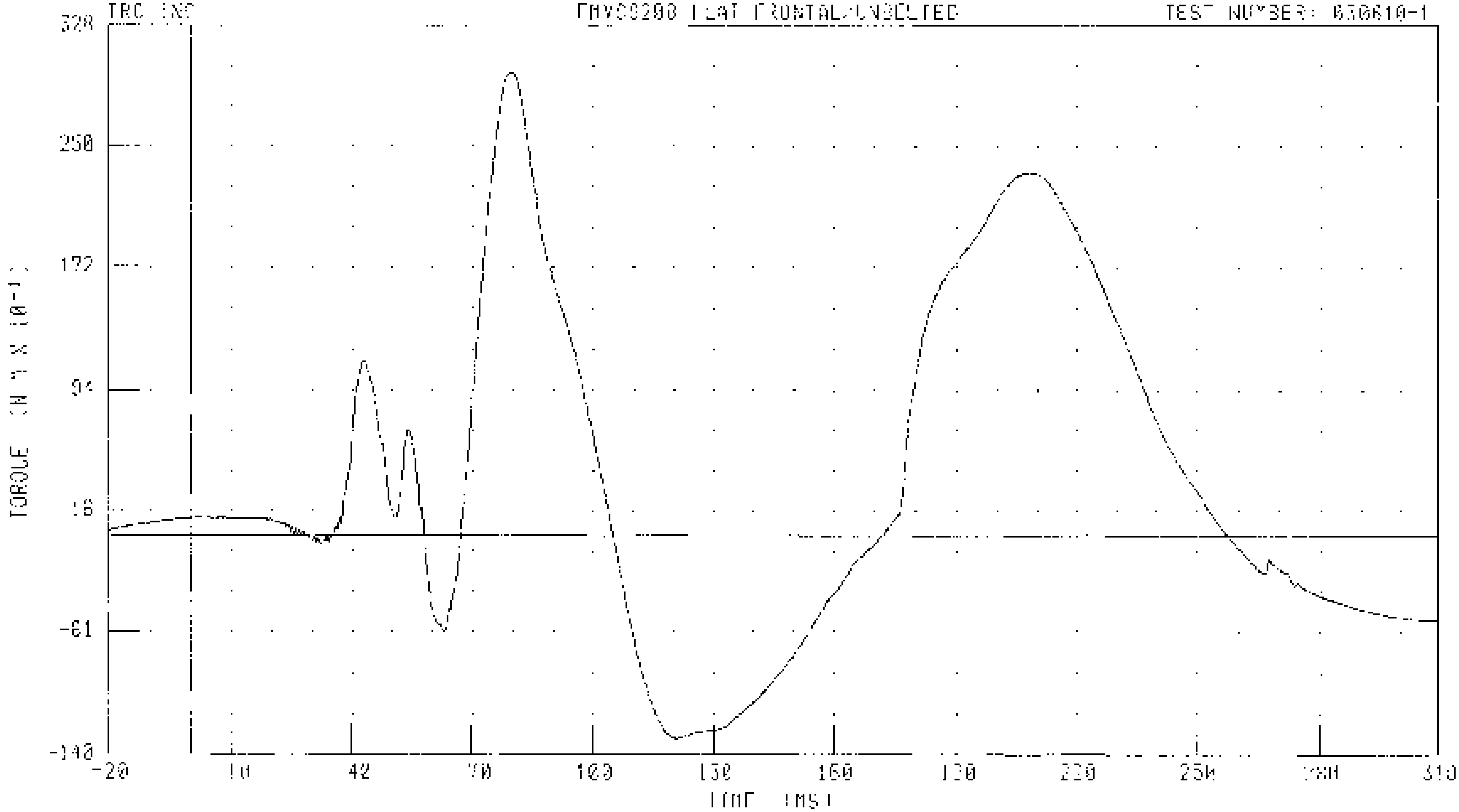

C3530E / 2003 HONDA ODYSSEY
RIGHT FRONT PASSENGER NECK MOMENT ABOUT Y AXIS
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER 030610 1
TRC INC
49
39
29
19
9
-1
-11
TORQUE (N M)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL NCKYM2
FILTER CFC CLASS 600
PEAK DATA 45.63 N M @ 80.00 MS, -10.52 N M @ 133.44 MS


C35306 / 2003 HONDA ODYSSEY
RIGHT FRONT PASSENGER NECK MOMENT ABOUT Z AXIS
TRC INC.
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER: 030610 1
60
20
-20
-60
-100
-140
-180
TORQUE (N M X 10^-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL NEKZM2
FILTER CH CLASS 600
PEAK DATA 5.80 N M @ 195.52 MS -16.84 N M @ 71.60 MS

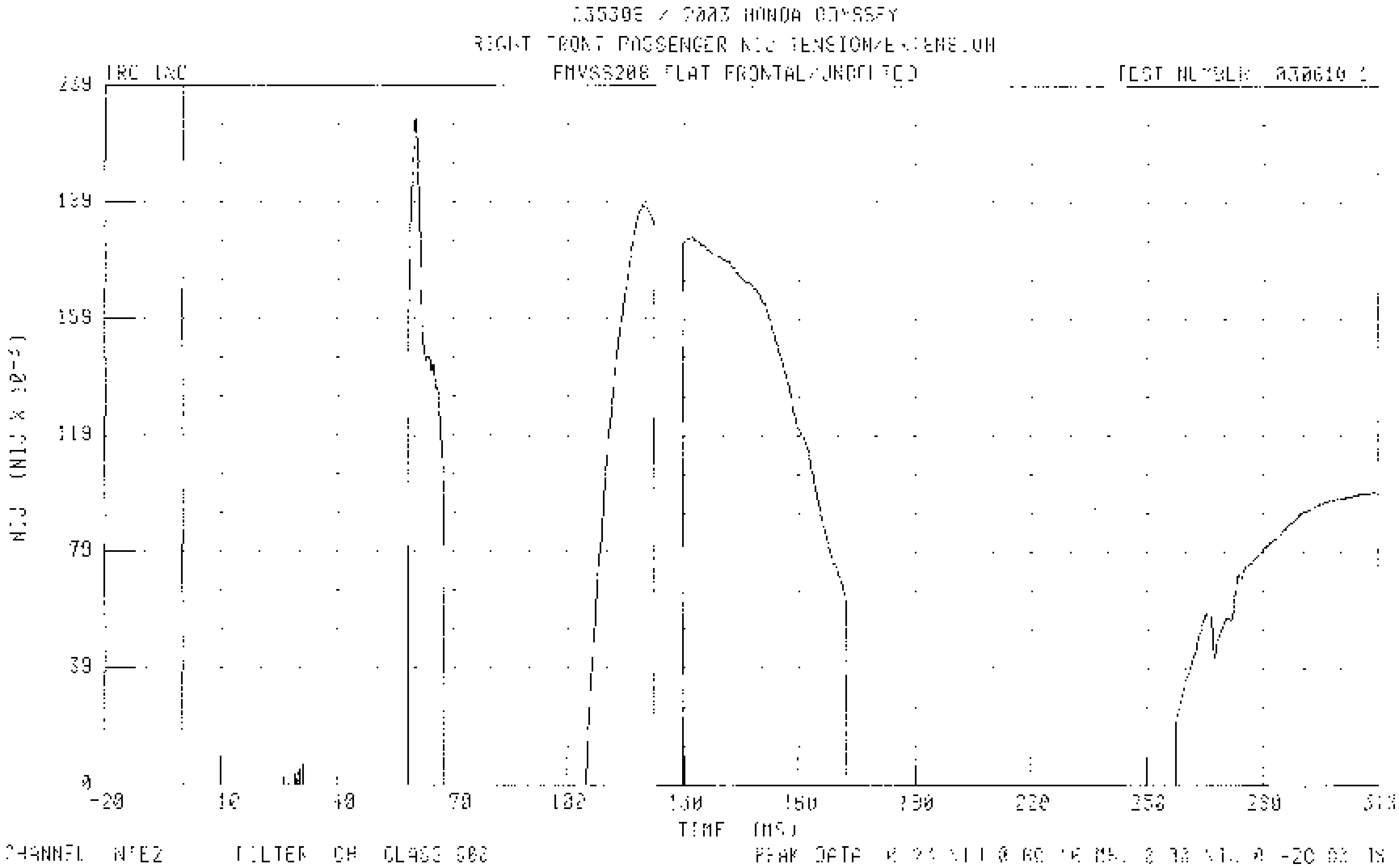
035306 / 2003 HONDA ODYSSEY

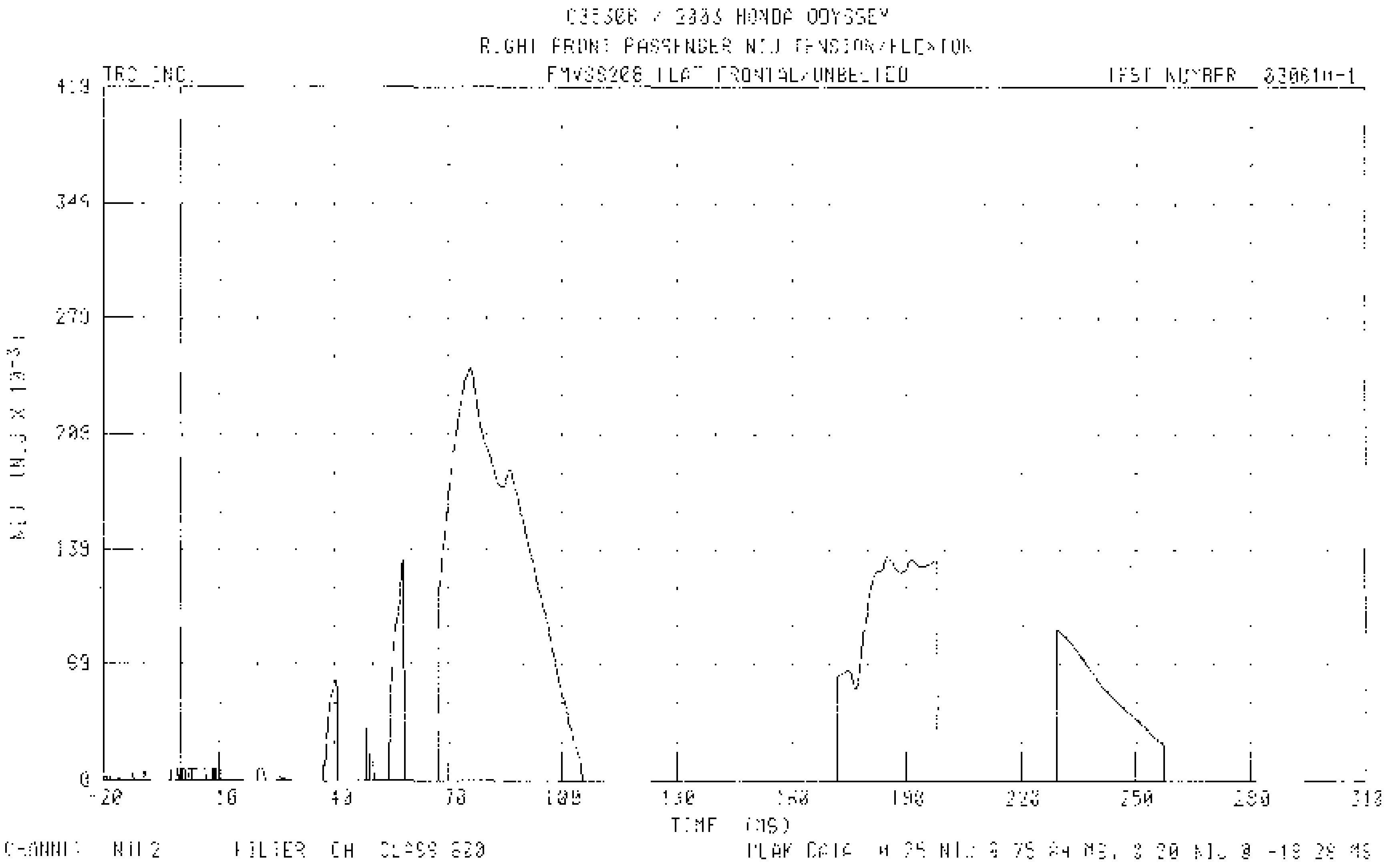
RIGHT FRONT PASSENGER NECK MOMENT OCCIPITAL CONDYLE ABOUT Y AXIS

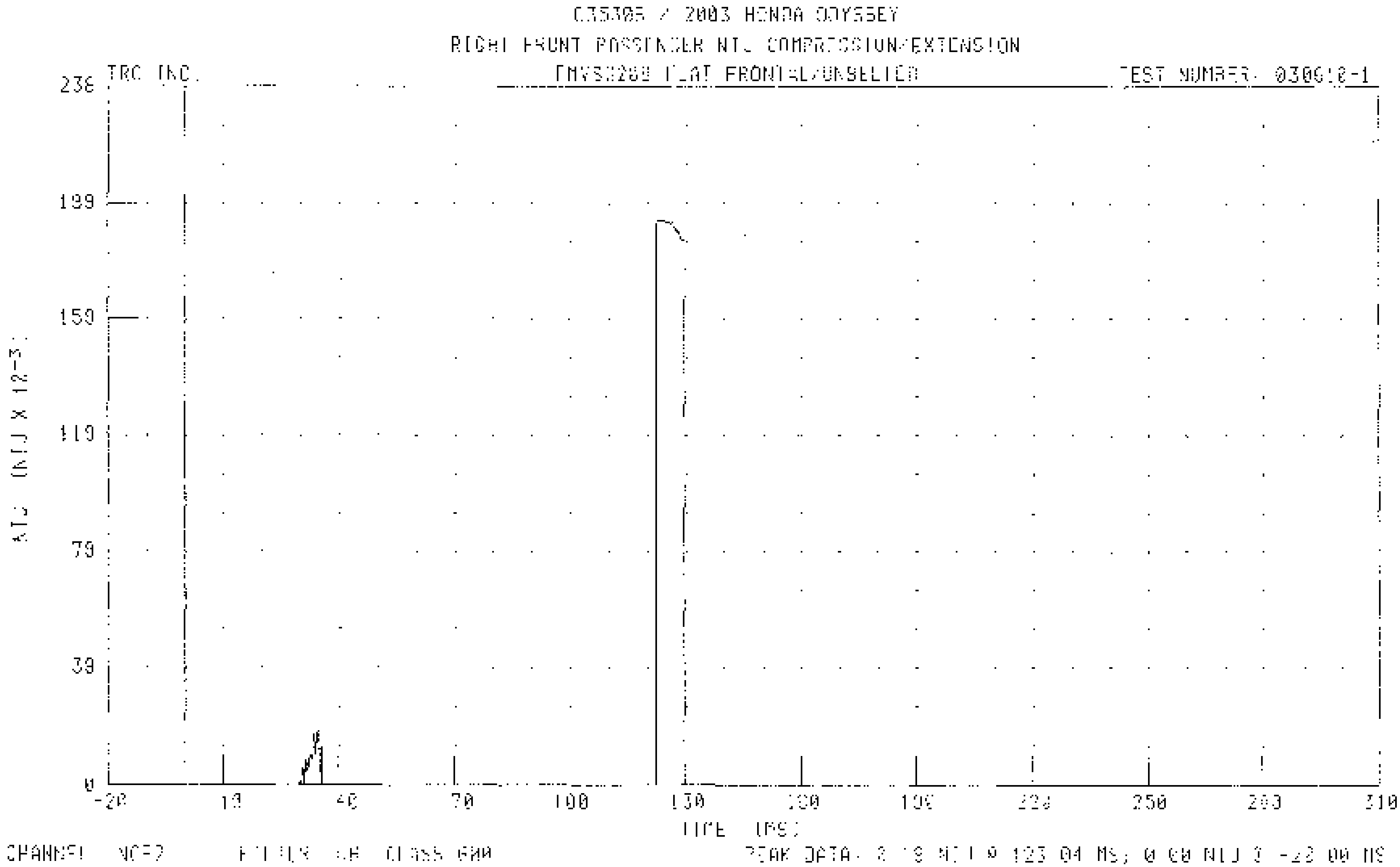
FMVSS208 FLAT FRONTAL/UNBELTED TEST NUMBER: 030610-1



CHANNEL NKOYMZ FILTER C- CLASS 600 PEAK DATA 29.61 N M @ 79.47 MS, -12.99 N M @ 123.96 MS


135308 / 2003 HONDA ODYSSEY
RIGHT FRONT PASSENGER NIJ TENSION/EXTENSION
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER 030610 1
TRC INC
239
199
159
119
79
39
0
-20
10
40
70
100
130
160
190
220
250
280
310
NIJ (NIJ X 10-2)
TIME (MS)
CHANNEL NTEZ
FILTER CH CLASS 600
PEAK DATA [illegible]


C35306 / 2003 HONDA ODYSSEY
RIGHT FRONT PASSENGER NIJ TENSION/FLEXION
TRC INC.
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER 030610-1
NIJ (NIJ X 10-3)
419
349
279
209
139
69
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL NIJ 2
FILTER CH CLASS 600
PEAK DATA 0.25 NIJ @ 75.84 MS, 0.00 NIJ @ -18.28 MS

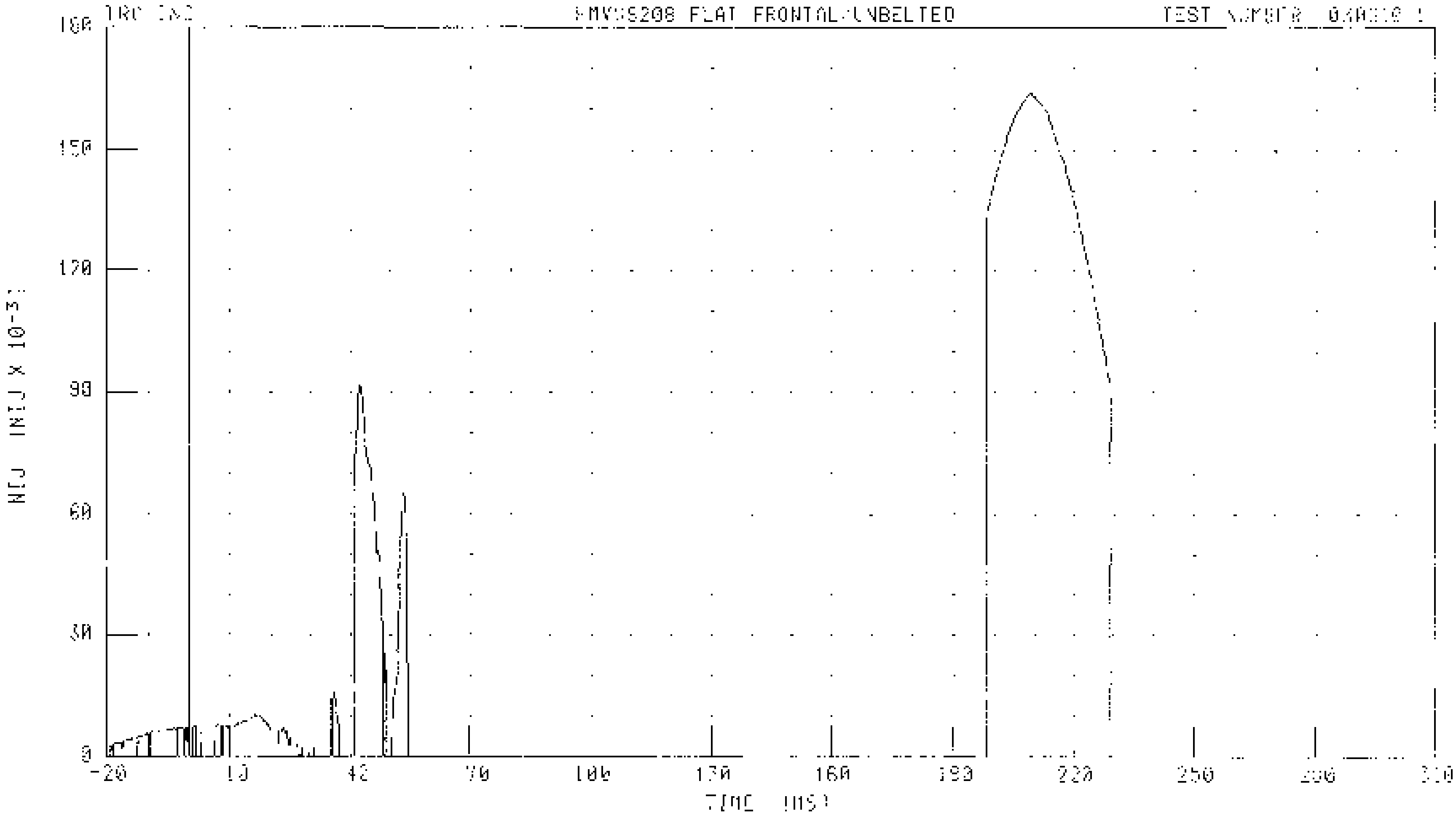


C35305 / 2003 HONDA ODYSSEY

RIGHT FRONT PASSENGER NIJ COMPRESSION/EXTENSION

FMVSS208 FLAT FRONTAL/UNBELTED

C35305 / 2005 HONDA ODYSSEY
RIGHT FRONT PASSENGER NIJ COMPRESSION/FLEXION
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER [illegible]



CHANNEL NCF?   FILTER: CFC CLASS 600   PEAK DATA 0.16 NIJ @ 208.19 MS, 0.00 NIJ @ -20.00 MS

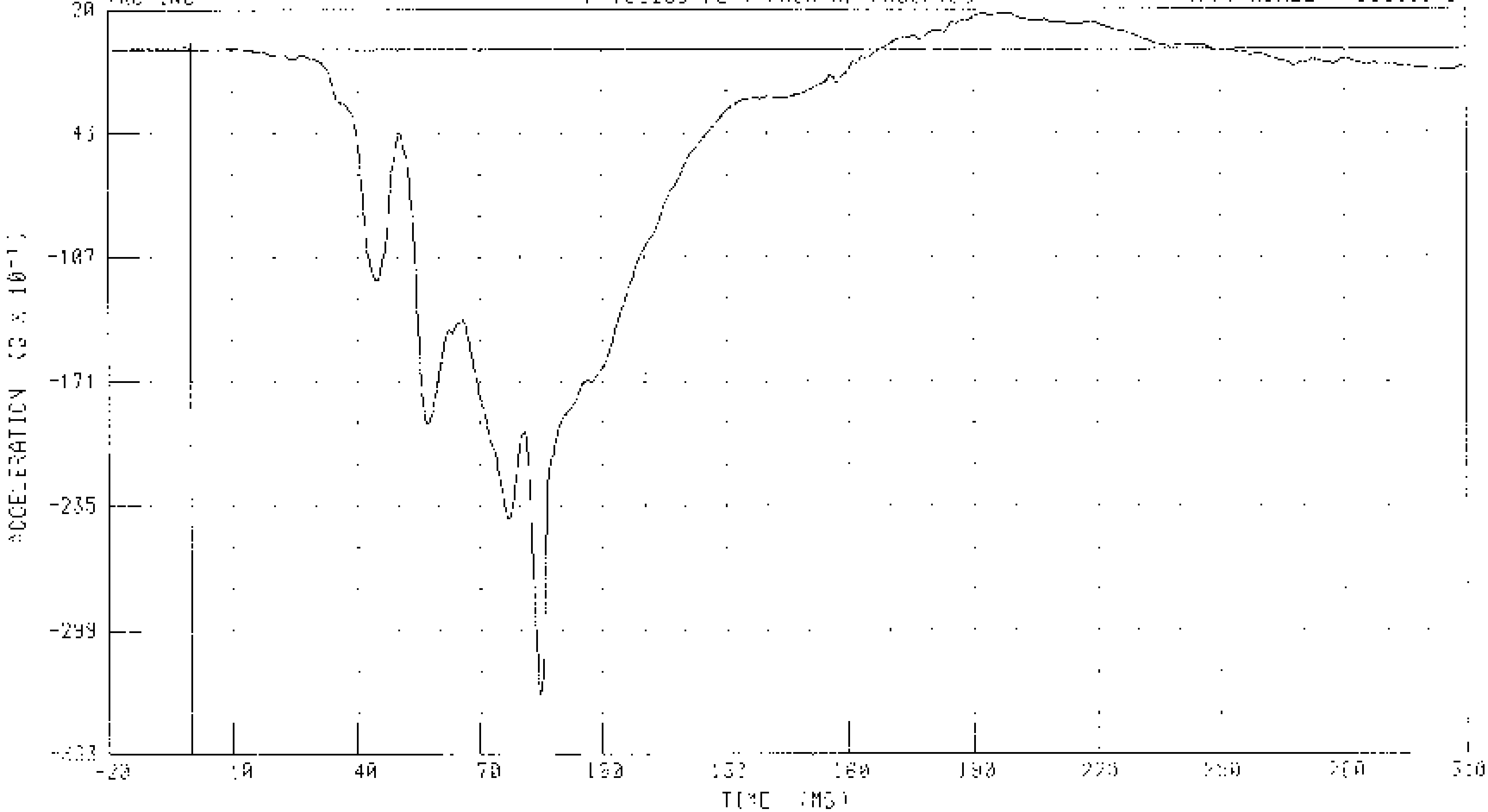
035306 / 2003 HONDA ODYSSEY

RIGHT FRONT PASSENGER CHEST X-AXIS ACCELERATION

FMVSS208 FLAT FRONTAL/UNBELTED

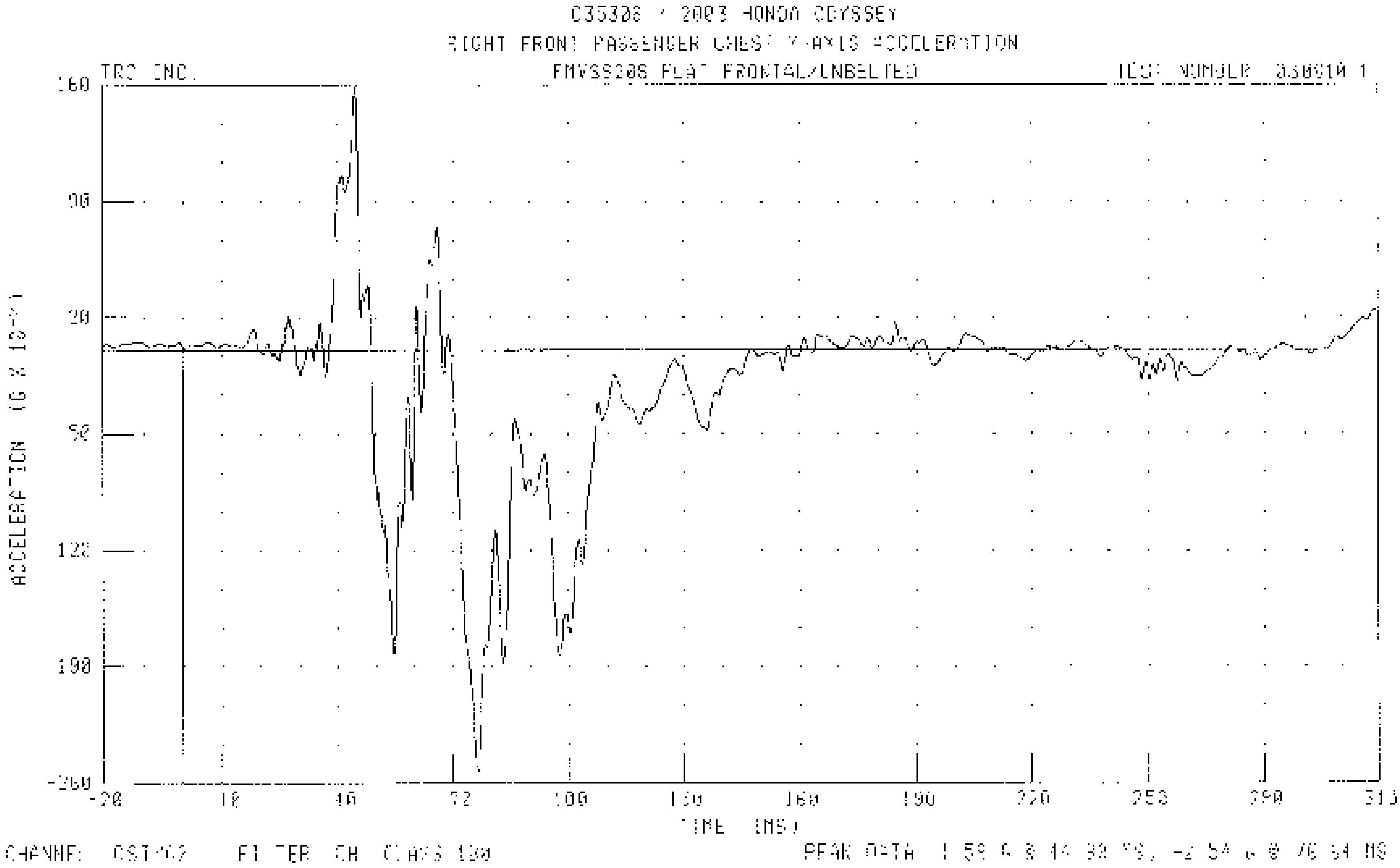
TRC INC

TEST NUMBER 030610-1



CHANNEL C01X02 FILTER CF CLASS 180

PEAK DATA 1.92 G @ 197.84 MS; -33.21 G @ 85.04 MS



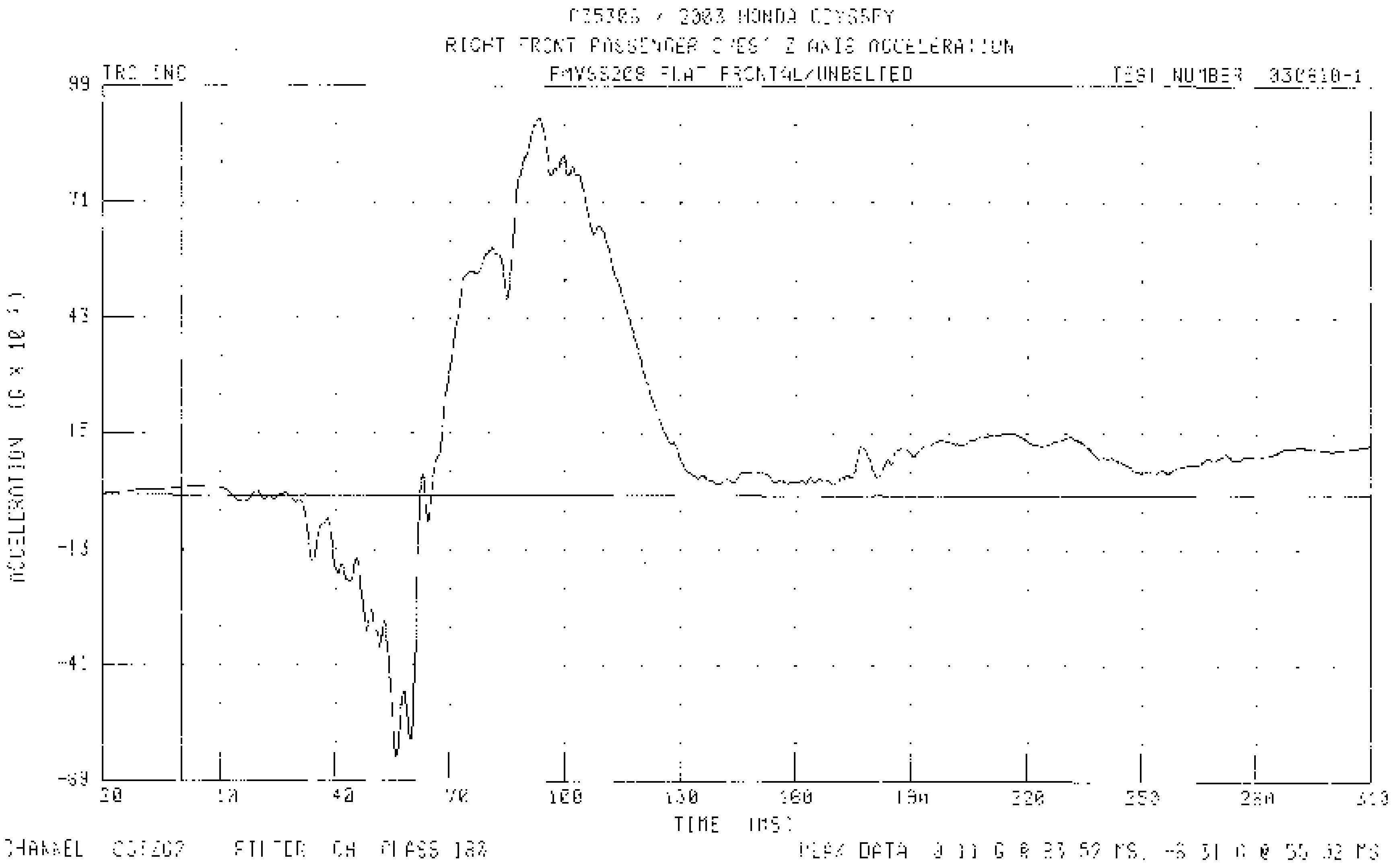
C35306 / 2003 HONDA ODYSSEY

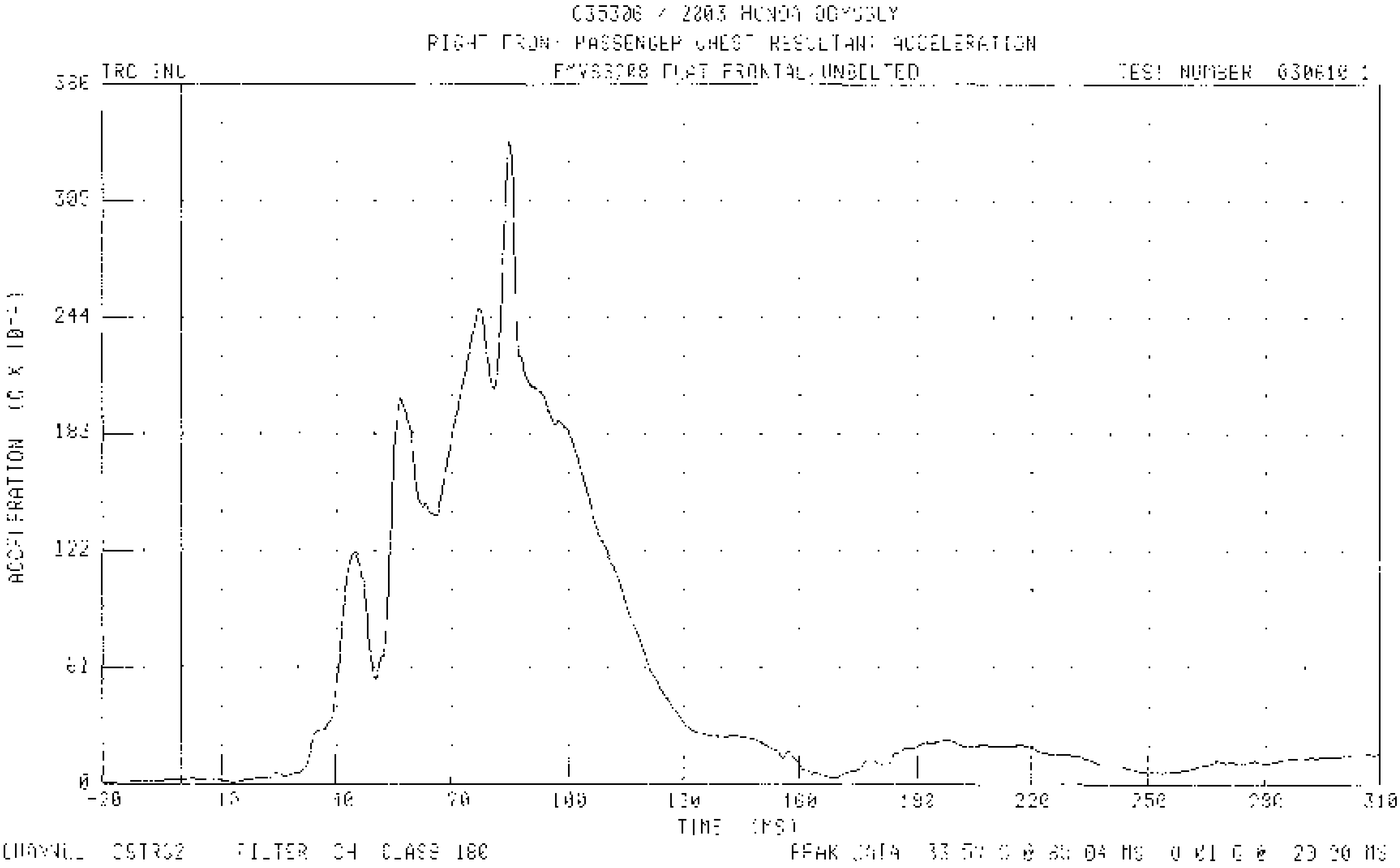
RIGHT FRONT PASSENGER CHEST Y-AXIS ACCELERATION

FMVSS208 FLAT FRONTAL/UNBELTED

CHANNEL CST-02 FILTER CH CLASS 180

PEAK DATA 1.59 G @ 14.32 MS, -2.54 G @ 76.54 MS


C05306 / 2003 HONDA ODYSSEY
RIGHT FRONT PASSENGER CHEST Z AXIS ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED
TRC INC
TEST NUMBER 030610-1
ACCELERATION (G X 10)
99
71
43
15
-13
-41
-69
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL C0F207
FILTER CH CLASS 180
PEAK DATA 9.11 G @ 93.52 MS, -6.31 G @ 55.32 MS


C35306 / 2003 HONDA ODYSSEY

RIGHT FRONT PASSENGER CHEST RESULTANT ACCELERATION

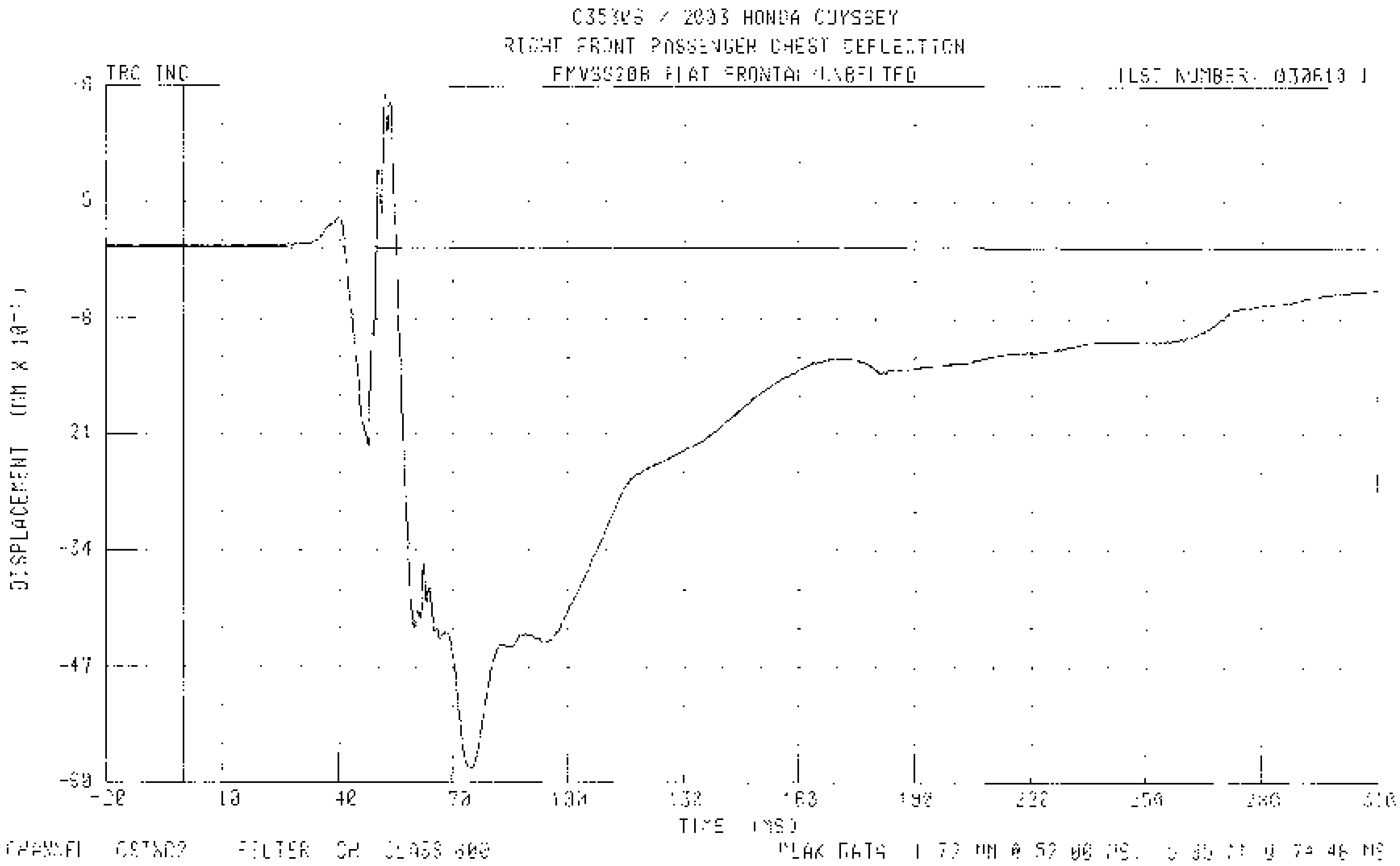
FMVSS208 FLAT FRONTAL, UNBELTED

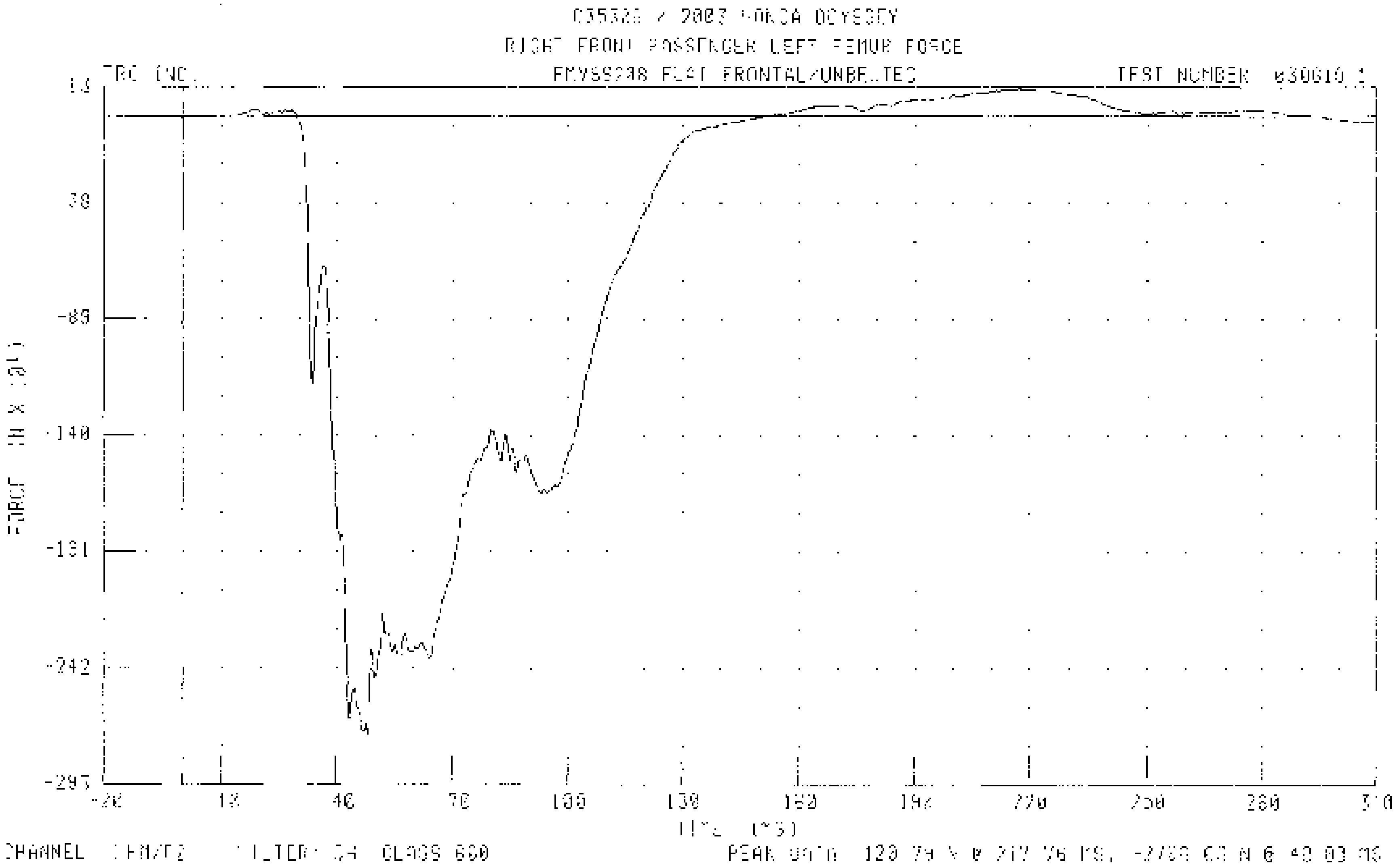
TRC INC

TEST NUMBER 030610 1

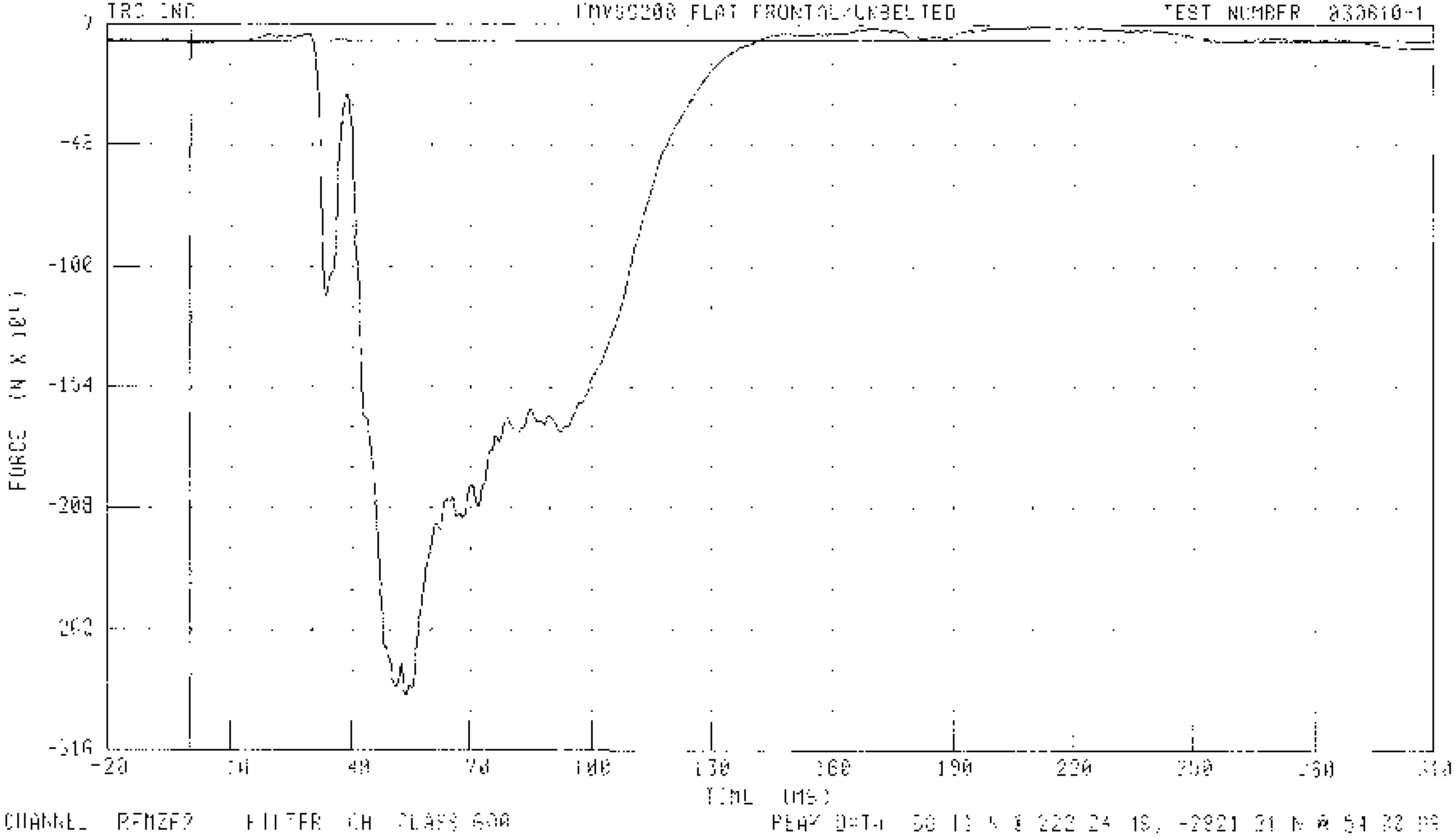
CHANNEL CSTR02 FILTER CH CLASS 180

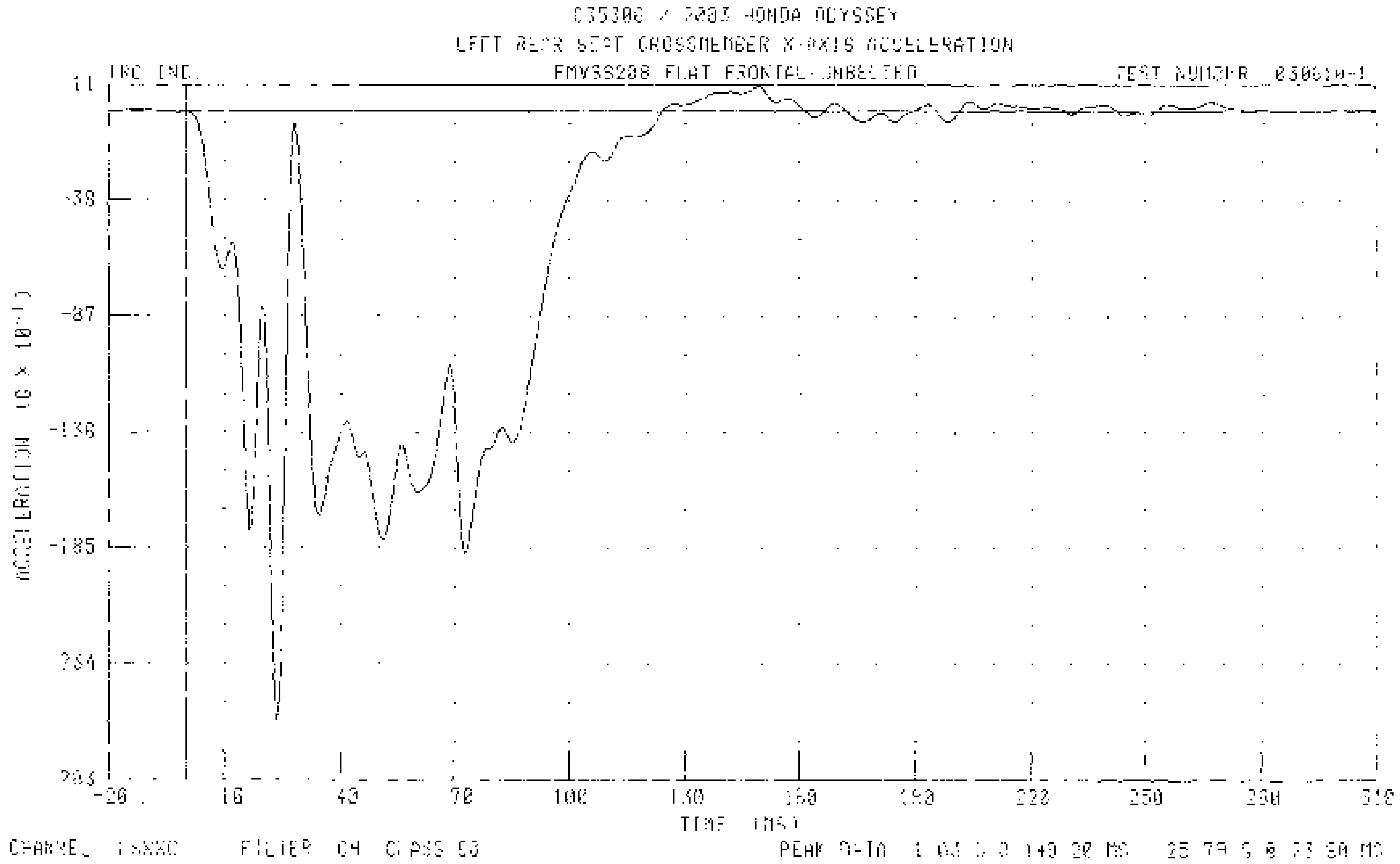
PEAK DATA 33.57 G @ 85.04 MS 0.01 G @ 23.20 MS


C353NS / 2003 HONDA ODYSSEY
RIGHT FRONT PASSENGER CHEST DEFLECTION
FMVSS208 FLAT FRONTAL UNBELTED
TEST NUMBER: 030610 1
TRC INC
18
5
-8
-21
-34
-47
-60
DISPLACEMENT (MM X 10^-0)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL C5TA02 FILTER CH CLASS 600
PEAK DATA 17.72 MM @ 52.00 MS, -58.83 MM @ 74.46 MS


C35328 / 2003 HONDA ODYSSEY
RIGHT FRONT PASSENGER LEFT FEMUR FORCE
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER 030610.1
TRC INC.
FORCE (N X 10^1)
13
-38
-89
-140
-191
-242
-293
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL FFM/F2
FILTER CH CLASS 600
PEAK DATA 120.79 N @ 217.76 MS, -2709.63 N @ 40.03 MS

C35306 / 2003 HONDA ODYSSEY
RIGHT FRONT PASSENGER RIGHT FEMUR FORCE
FMVSS208 FLAT FRONTAL/UNBELTED





C35300 / 2003 HONDA ODYSSEY

LEFT REAR SEAT CROSSMEMBER X-AXIS ACCELERATION

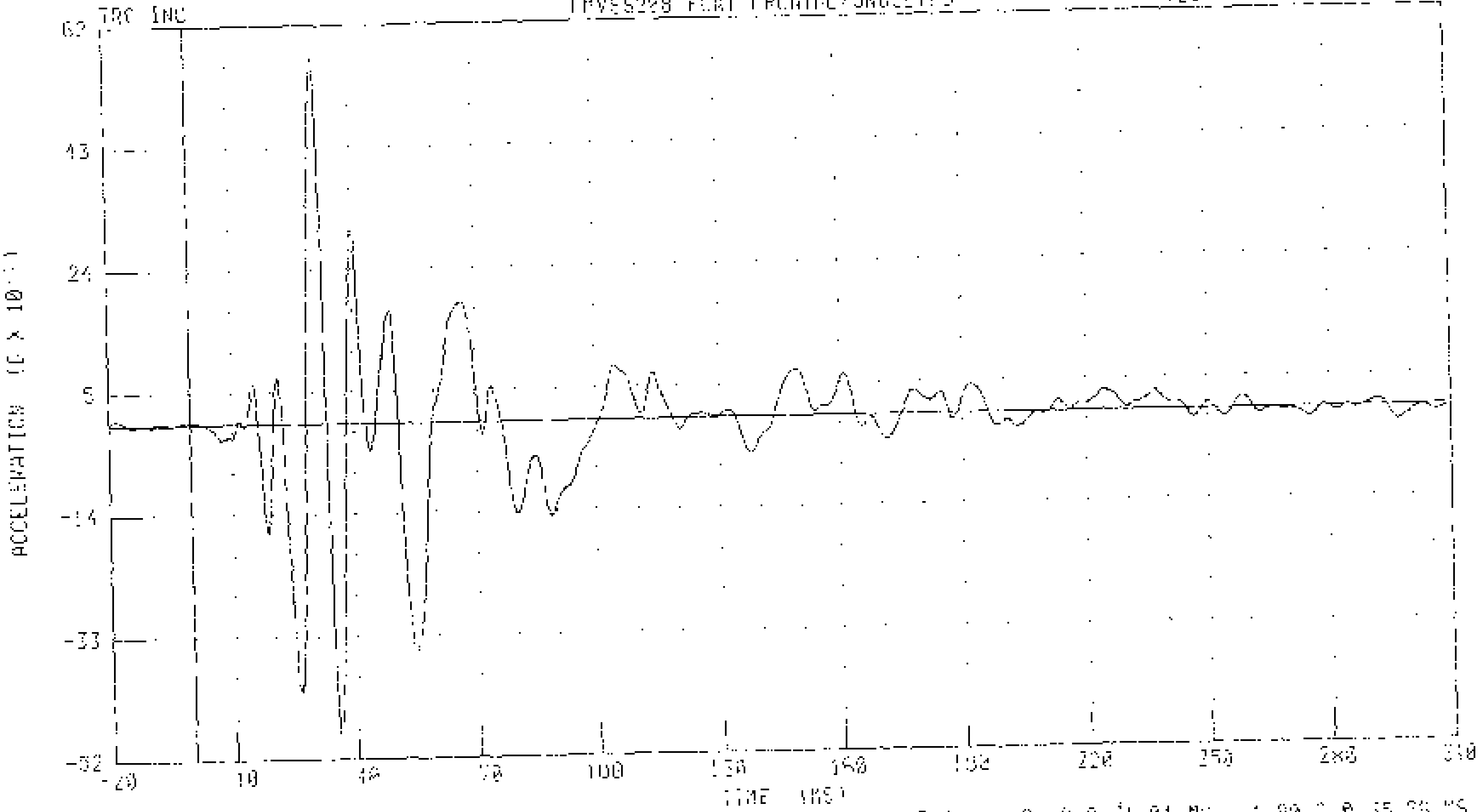
FMVSS208 FLAT FRONTAL-UNBELTED

TEST NUMBER 030610-1

CHANNEL 1AXXC   FILTER CH CLASS 60   PEAK G-TO 1.03 G @ 140.20 MS   25.79 G @ 73.50 MS

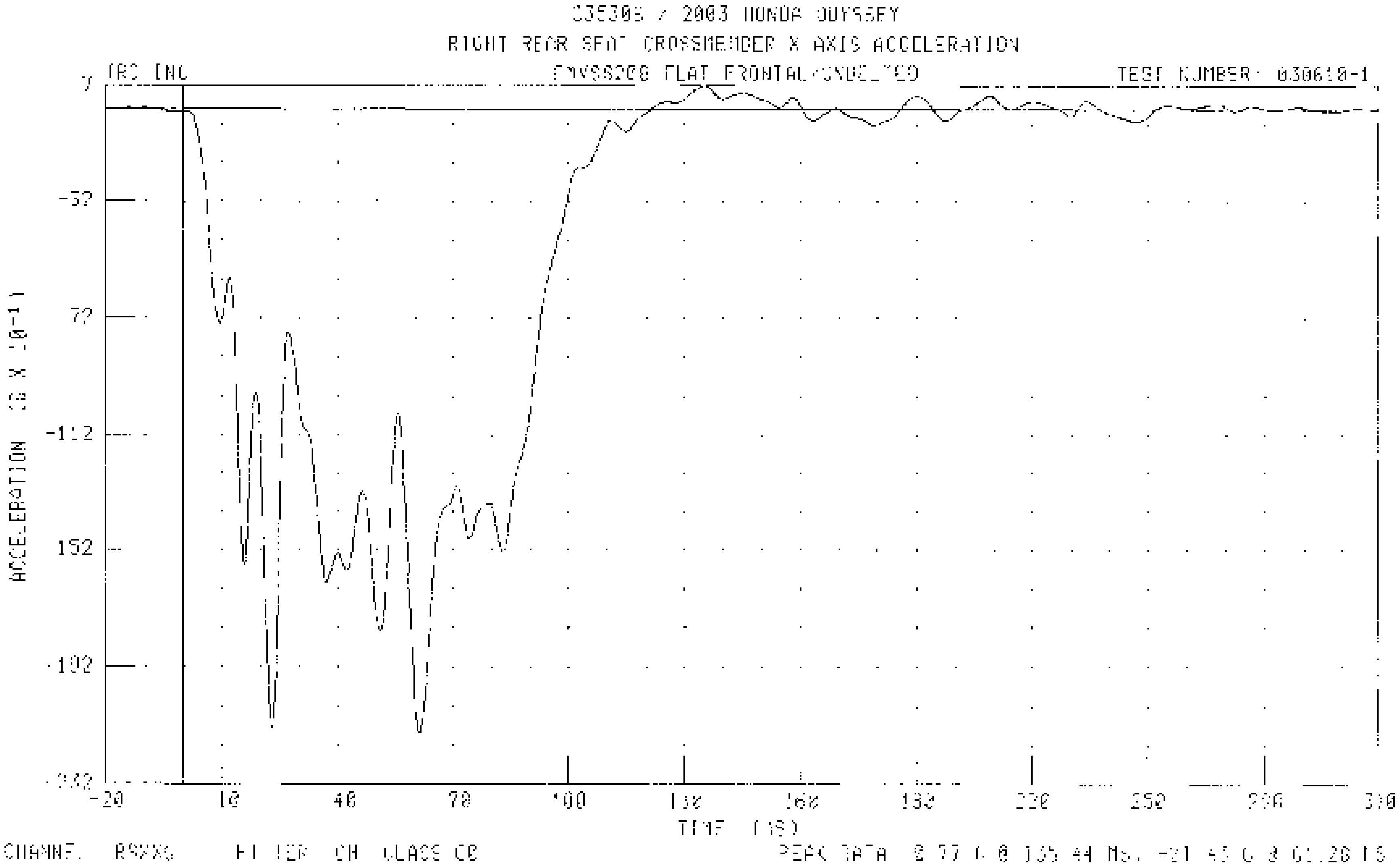
C35325 / 2005 HONDA ODYSSEY
LEFT REAR SEAT CROSSMEMBER Y-AXIS ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED

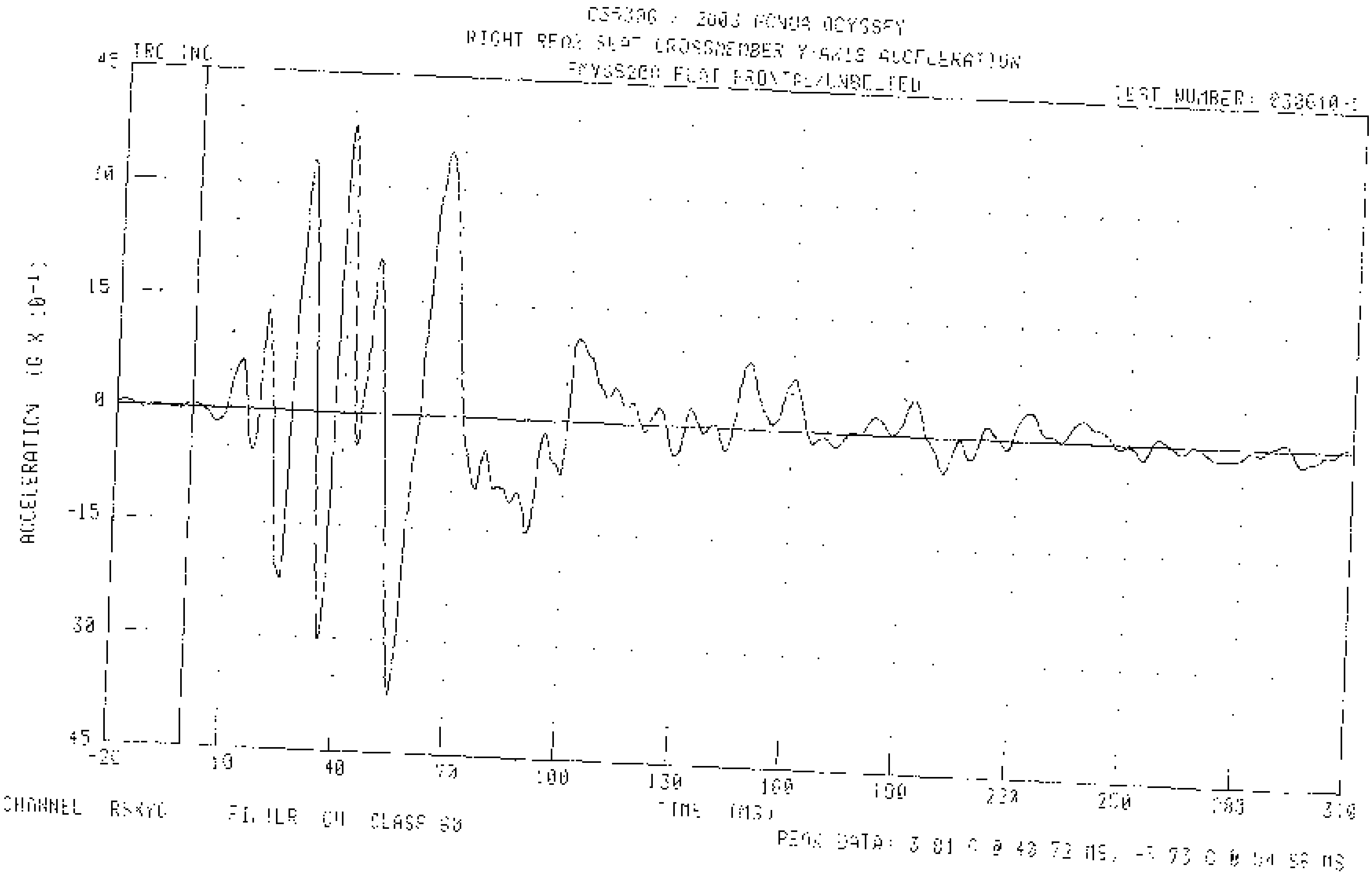
TEST NUMBER 030610-1



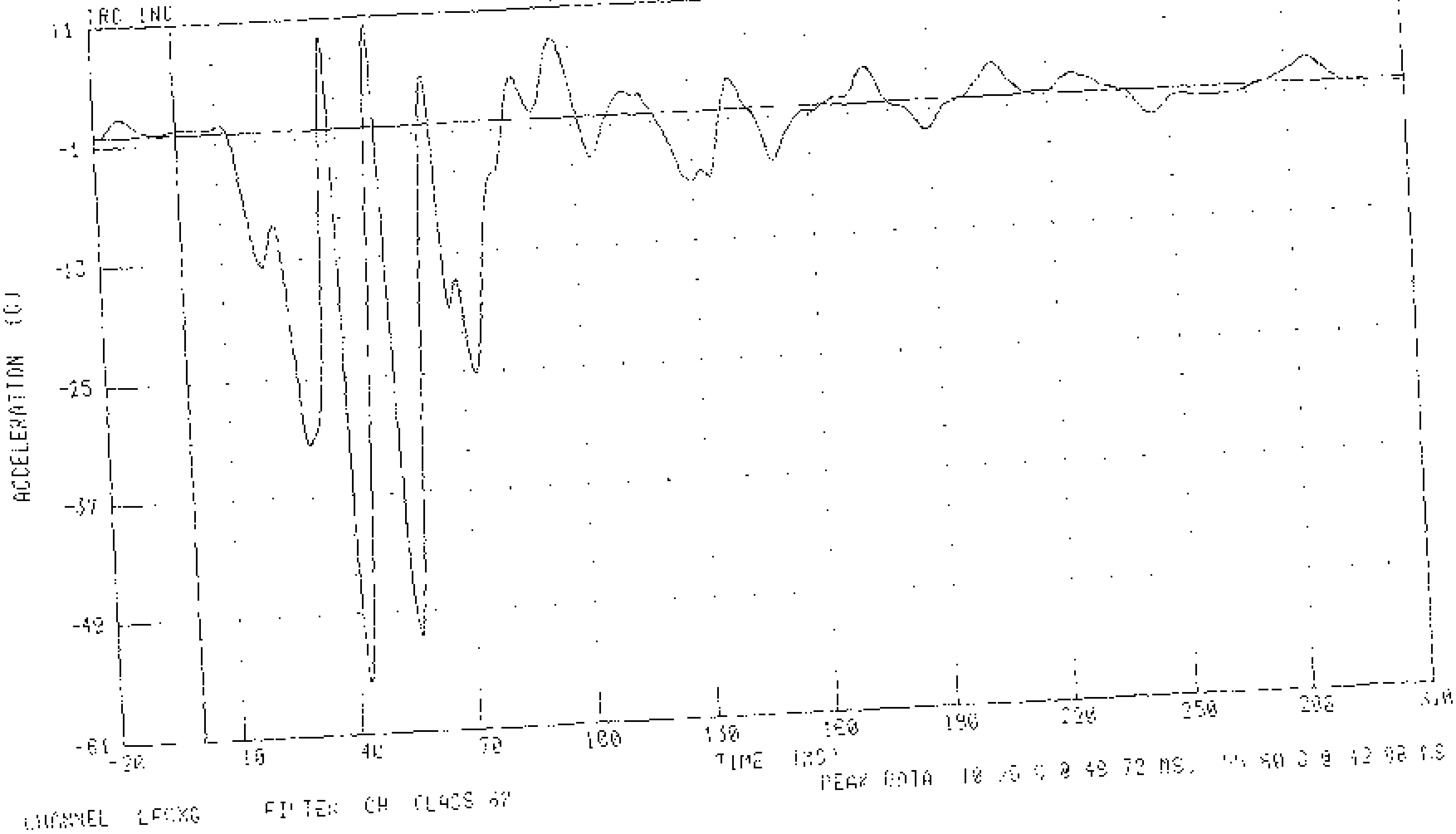
PEAK DATA 5.84 G @ 31.24 MS, -4.99 G @ 35.96 MS

CHANNEL L9XYG FILTER SAE CLASS 60


C35305 / 2003 HONDA ODYSSEY
RIGHT REAR SEAT CROSSMEMBER X AXIS ACCELERATION
TRC INC
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER: 030610-1
ACCELERATION (G X 10-1)
8
-32
-72
-112
-152
-192
-232
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: RSXXG
FILTER: CH CLASS 60
PEAK DATA: 2.77 G @ 135.44 MS, -21.45 G @ 61.20 MS

C53306 - 2003 HONDA ODYSSEY
RIGHT REAR SEAT CROSSMEMBER Y-AXIS ACCELERATION
ODYSS200 FLAT FRONTAL/UNBELTED
TEST NUMBER: 030610-1
TRC INC
ACCELERATION (G X 10-1)
45
30
15
0
-15
-30
-45
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL RSXYC
FILTER CH CLASS 60
PEAK DATA: 3.81 G @ 40.72 MS, -3.73 G @ 54.56 MS

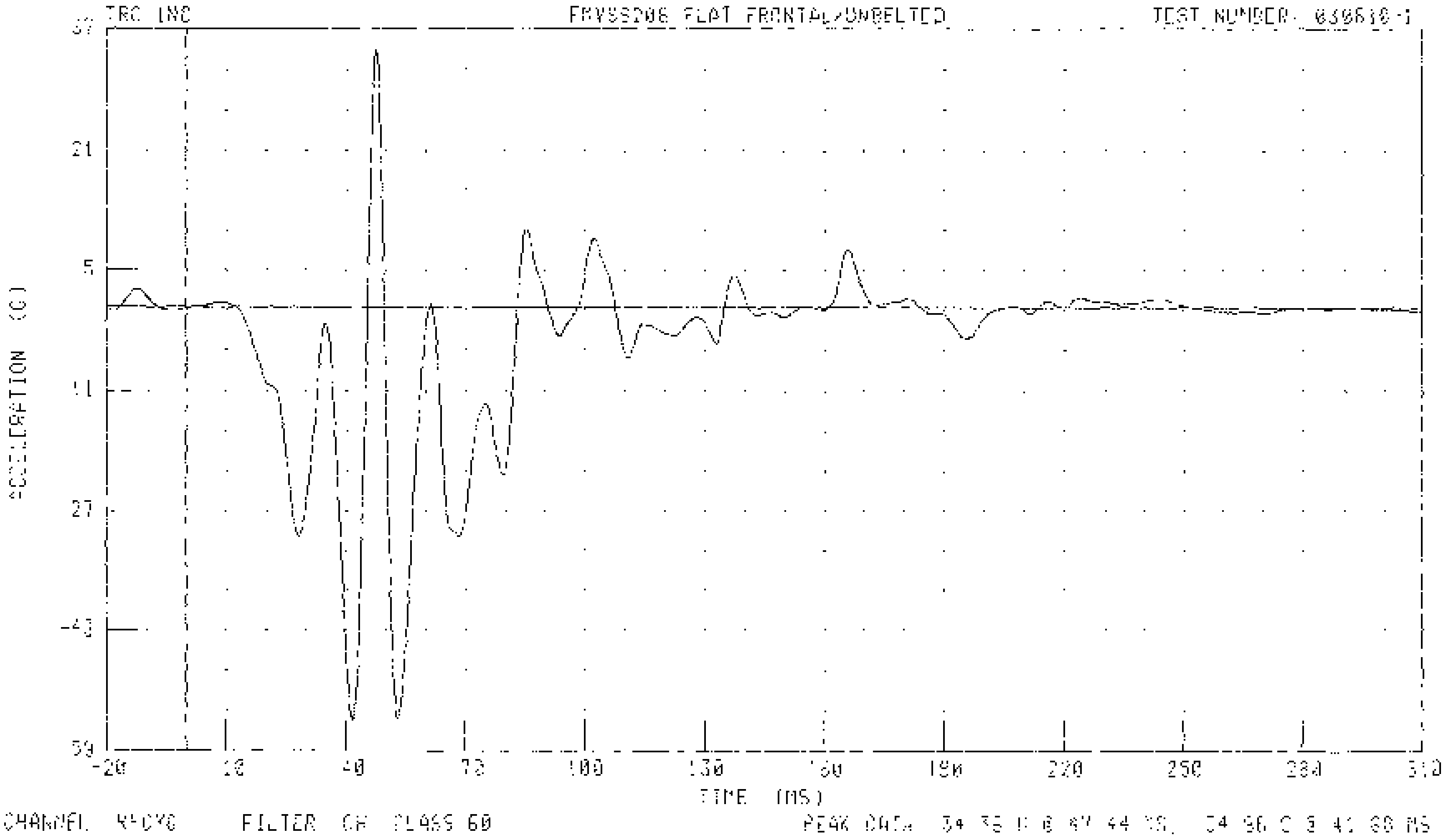
C35396 - 2003 HONDA ODYSSEY
LEFT FRONT BRAKE CALIPER X-AXIS ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER: 030610 1

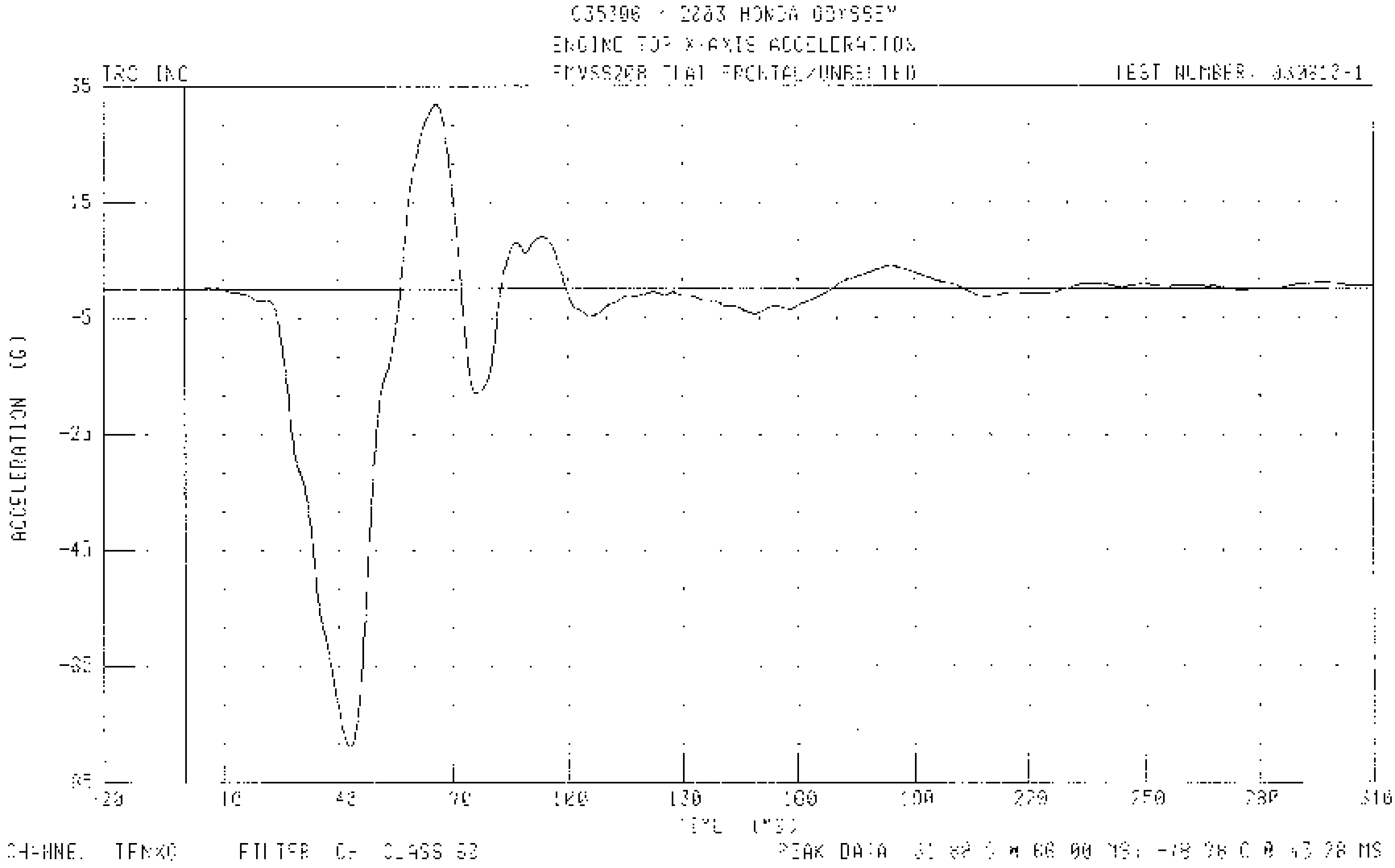


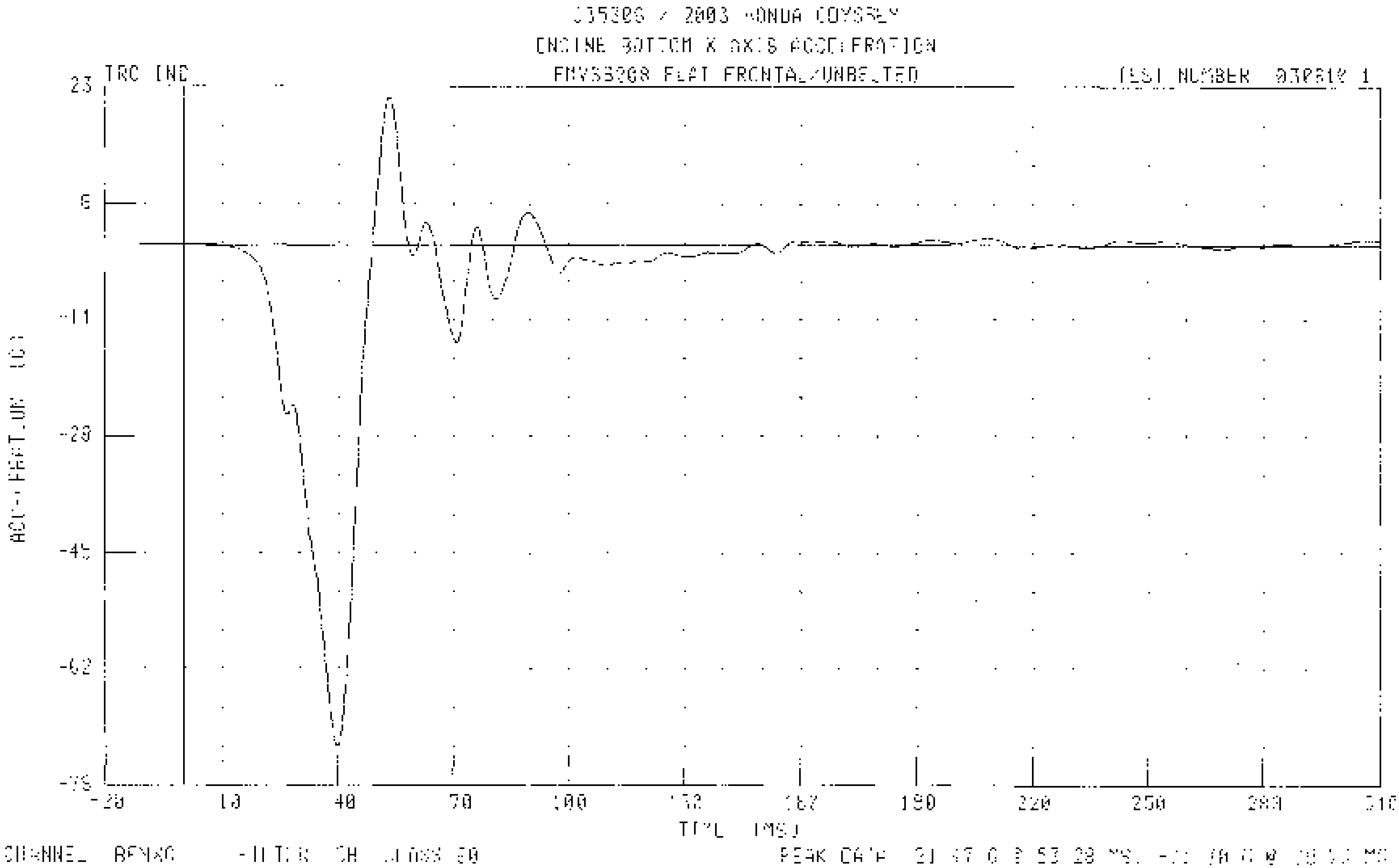
C35306 / 2003 HONDA ODYSSEY

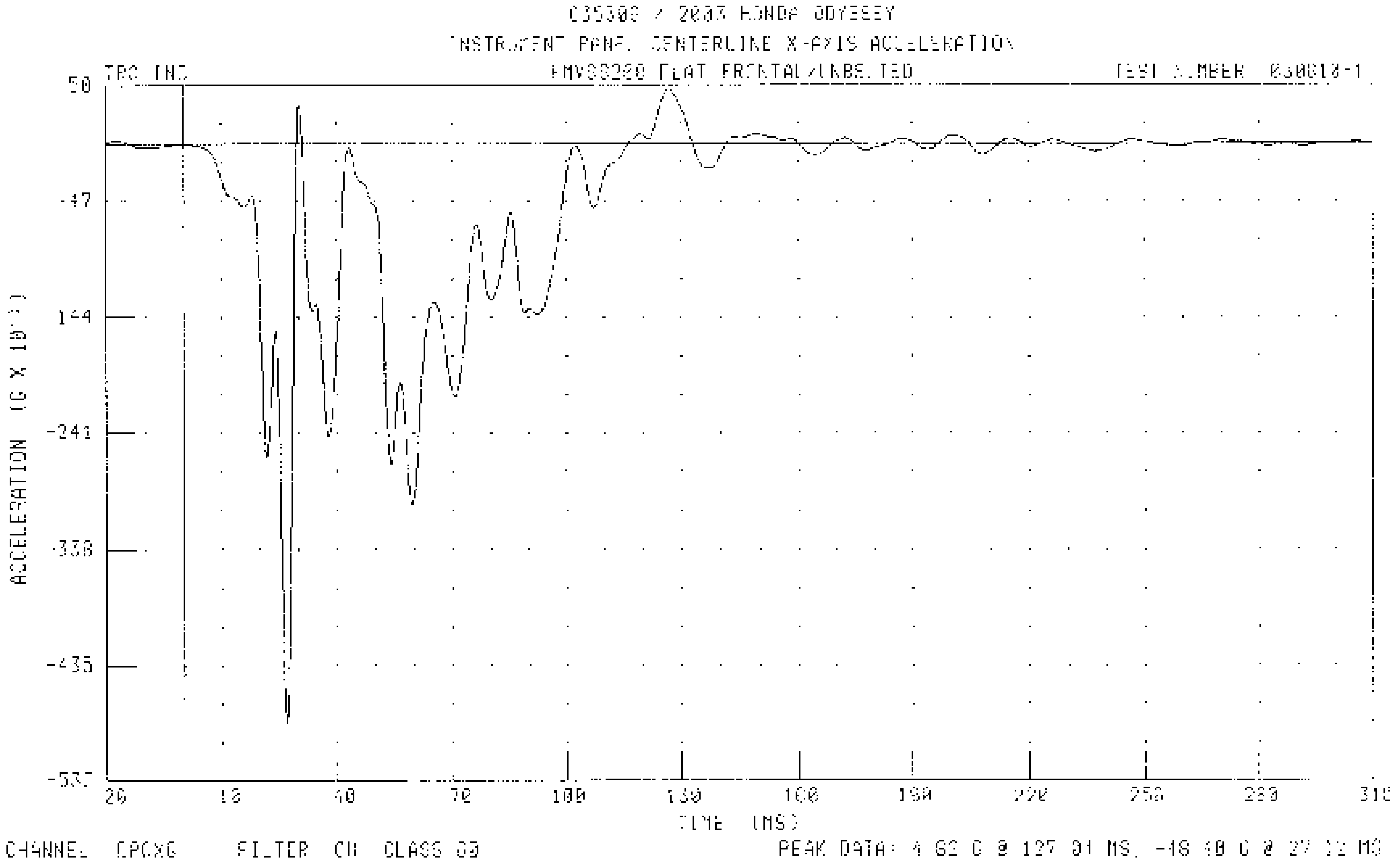
RIGHT FRONT BRAKE CALIPER X-AXIS ACCELERATION

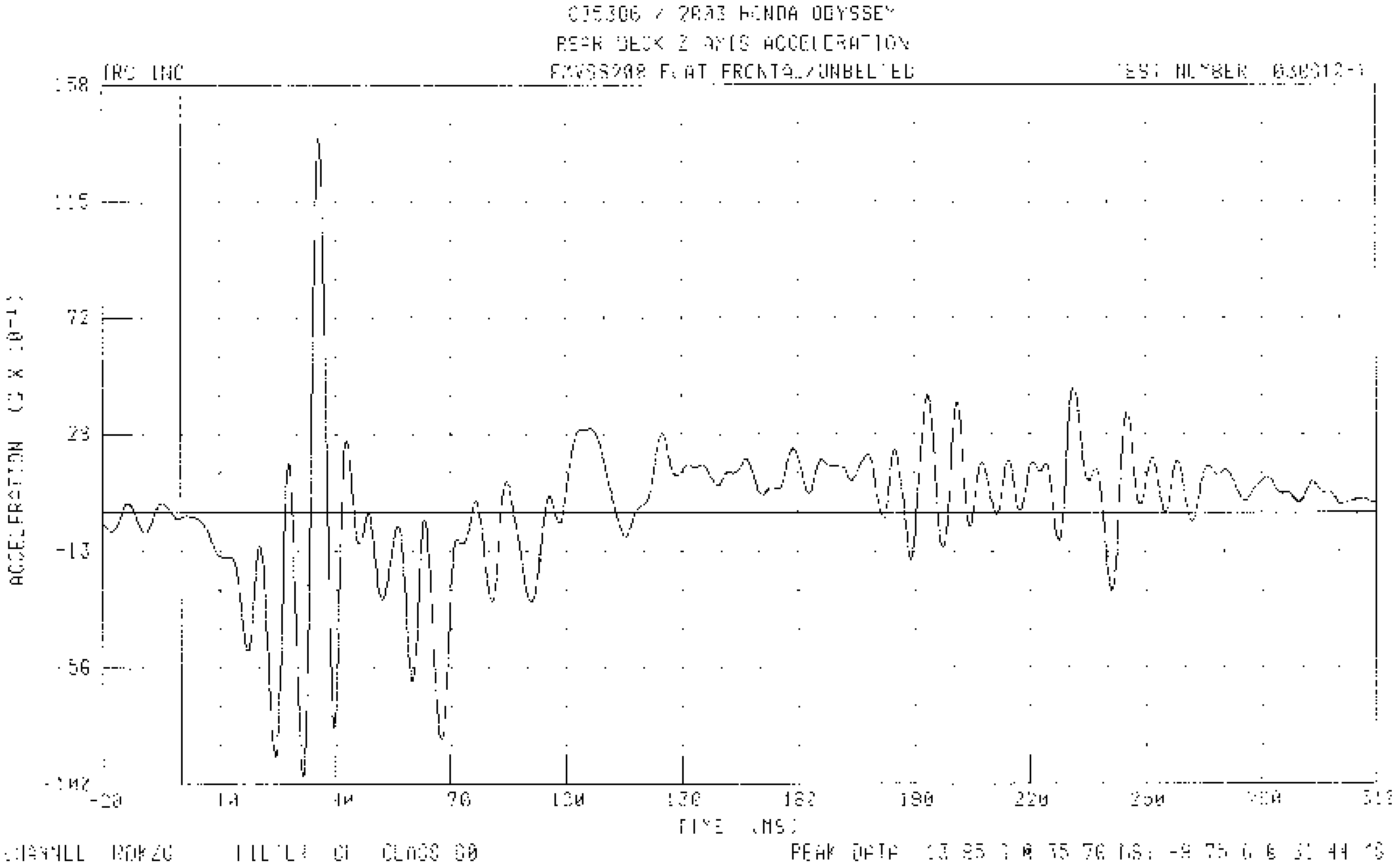
FMVSS208 FLAT FRONTAL/UNBELTED




C35306 - 2003 HONDA ODYSSEY
ENGINE TOP X-AXIS ACCELERATION
FMVSS208 TIAT FRONTAL/UNBELTED
TRC INC
TEST NUMBER: 030612-1
35
15
-5
-25
-45
-65
-85
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: TENX0
FILTER: CF CLASS 60
PEAK DATA: 31.82 G @ 66.00 MS; -78.96 G @ 43.28 MS


J3530S / 2003 HONDA ODYSSEY
ENGINE BOTTOM X AXIS ACCELERATION
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER 030610 1
TRC IND
23
6
-11
-28
-45
-62
-79
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL BENXG
FILTER CH CLASS 60
PEAK DATA 21.47 G @ 53.28 MS, -[illegible] G @ [illegible] MS


C35300 / 2003 HONDA ODYSSEY
INSTRUMENT PANEL CENTERLINE X-AXIS ACCELERATION
TRC INC
FMVSS208 FLAT FRONTAL/UNBELTED
TEST NUMBER 030610-1
50
-47
-144
-241
-338
-435
-532
ACCELERATION (G X 10^-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL CPCXG
FILTER CH CLASS 60
PEAK DATA: 4.62 G @ 127.01 MS, -48.40 G @ 27.12 MS

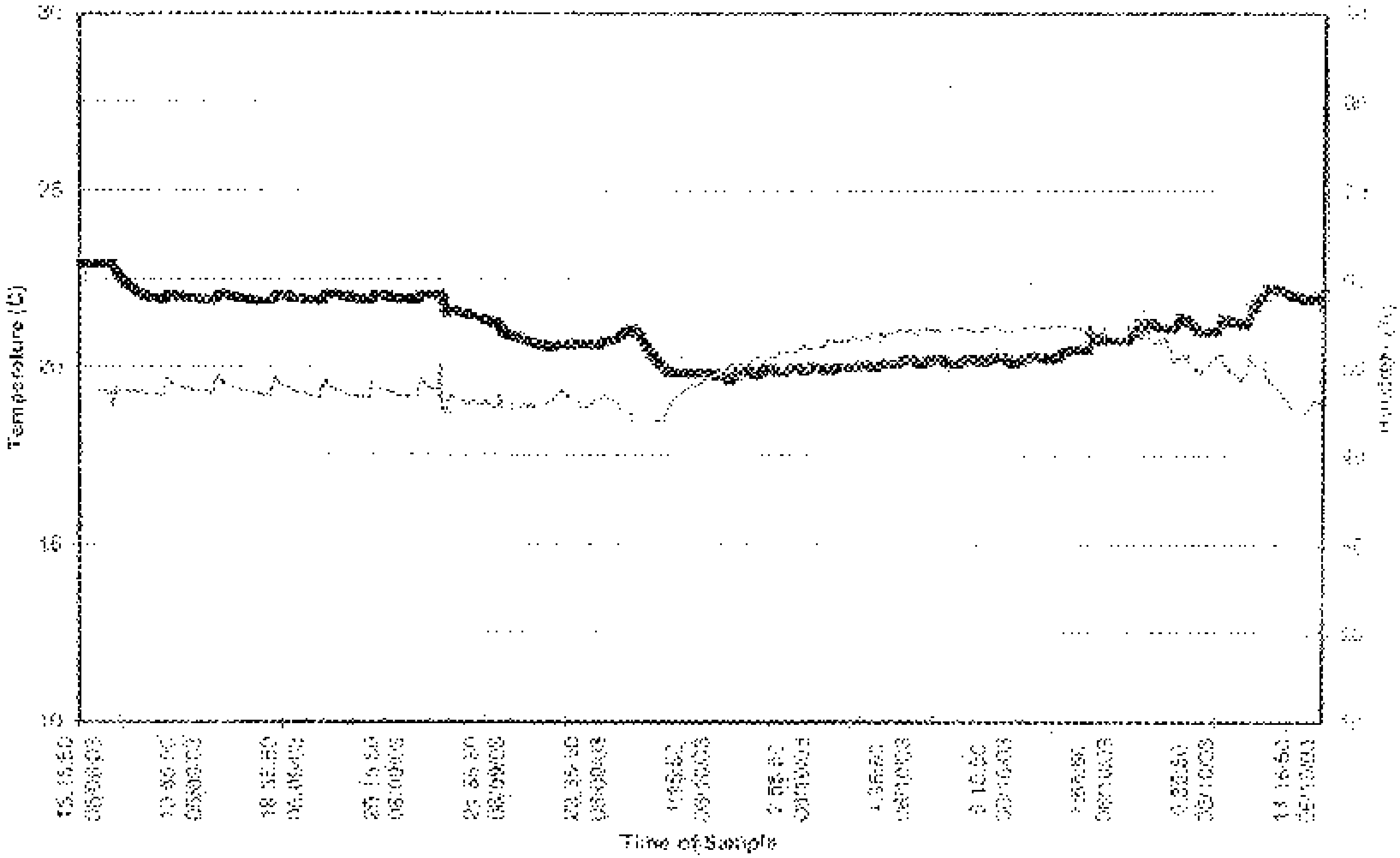


C35306 / 2003 HONDA ODYSSEY

REAR DECK Z AXIS ACCELERATION

FMVSS208 FLAT FRONTAL/UNBELTED

C35306 / 2003 HONDA ODYSSEY



Section 7

Photographs

List of Photographs

Image	Image Title	Page
1	Pre-Test Front View	7-5
2	Post-Test Front View	7-6
3	Pre-Test Left Side View	7-7
4	Post-Test Left Side View	7-8
5	Pre-Test Right Side View	7-9
6	Post-Test Right Side View	7-10
7	Pre-Test Left Front Three-Quarter View	7-11
8	Post-Test Left Front Three-Quarter View	7-12
9	Pre-Test Right Rear Three-Quarter View	7-13
10	Post-Test Right Rear Three-Quarter View	7-14
11	Pre-Test Windshield View	7-15
12	Post-Test Windshield View	7-16
13	Pre-Test Engine Compartment View	7-17
14	Post-Test Engine Compartment View	7-18
15	Pre-Test Steering Column and Firewall - Interior View	7-19
16	Post-Test Steering Column and Firewall - Interior View	7-20
17	Pre-Test Front Underbody View	7-21
18	Post-Test Front Underbody View	7-22
19	Pre-Test Front Mid Underbody View	7-23
20	Post-Test Front Mid Underbody View	7-24
21	Pre-Test Mid Underbody View	7-25
22	Post-Test Mid Underbody View	7-26
23	Pre-Test Rear Mid Underbody View	7-27
24	Post-Test Rear Mid Underbody View	7-28
25	Pre-Test Rear Underbody View	7-29
26	Post-Test Rear Underbody View	7-30
27	Pre-Test Fuel Tank View	7-31
28	Post-Test Fuel Tank View	7-32
29	Pre-Test Fuel Lines - View 1	7-33

List of Photographs, Continued

Image	Image Title	Page
30	Post-Test Fuel Lines - View 1	7-34
31	Pre-Test Fuel Lines -View 2	7-35
32	Post-Test Fuel Lines -View 2	7-36
33	Pre-Test Fuel Filler Neck View	7-37
34	Post-Test Fuel Filler Neck View	7-38
35	Pre-Test Fuel Filler Cap View	7-39
36	Post-Test Fuel Filler Cap View	7-40
37	Pre-Test Driver Dummy Front View	7-41
38	Post-Test Driver Dummy Front View	7-42
39	Pre-Test Driver Dummy Position View	7-43
40	Post-Test Driver Dummy Position View	7-44
41	Pre-Test Driver Seat Position View	7-45
42	Post-Test Driver Seat Position View	7-46
43	Pre-Test Driver Dummy Knee Bolster View	7-47
44	Post-Test Driver Dummy Knee Bolster View	7-48
45	Pre-Test Passenger Dummy Front View	7-49
46	Post-Test Passenger Dummy Front View	7-50
47	Pre-Test Passenger Dummy Position View	7-51
48	Post-Test Passenger Dummy Position View	7-52
49	Pre-Test Passenger Seat Position View	7-53
50	Post-Test Passenger Seat Position View	7-54
51	Pre-Test Passenger Dummy Knee Bolster View	7-55
52	Post-Test Passenger Dummy Knee Bolster View	7-56
53	Post-Test Driver Dummy Head Contact - View 1	7-57
54	Post-Test Driver Dummy Head Contact - View 2	7-58
55	Post-Test Driver Dummy Head Contact - View 3	7-59
56	Post-Test Driver Dummy Knee Contact - View 1	7-60
57	Post-Test Driver Dummy Knee Contact - View 2	7-61
58	Post-Test Passenger Dummy Head Contact - View 1	7-62

List of Photographs, Continued

Image	Image Title	Page
59	Post-Test Passenger Dummy Head Contact - View 2	7-63
60	Post-Test Passenger Dummy Knee Contact - View 1	7-64
61	Post-Test Passenger Dummy Knee Contact - View 2	7-65
62	Post-Test Vehicle on Static Rollover Device - 90° View	7-66
63	Post-Test Vehicle on Static Rollover Device - 180° View	7-67
64	Post-Test Vehicle on Static Rollover Device - 270° View	7-68
65	Post-Test Vehicle on Static Rollover Device - 360° View	7-69
66	Post-Test Vehicle Ballast View	7-70
67	Vehicle Certification Label View	7-71
68	Recommended Tire Pressure Label View	7-72

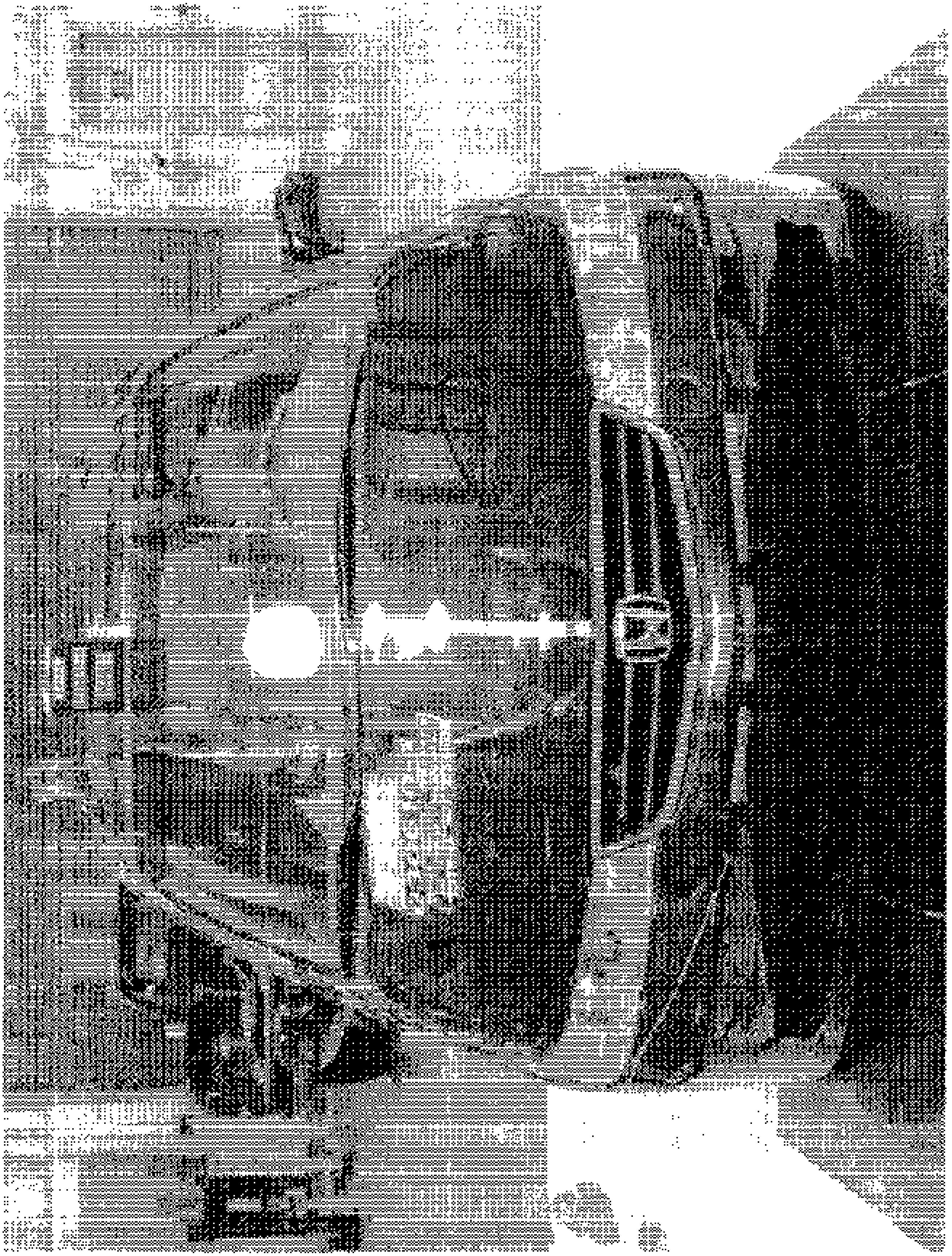


Image 1 Pre-Test Front View

Image 2 Post-Test Front View

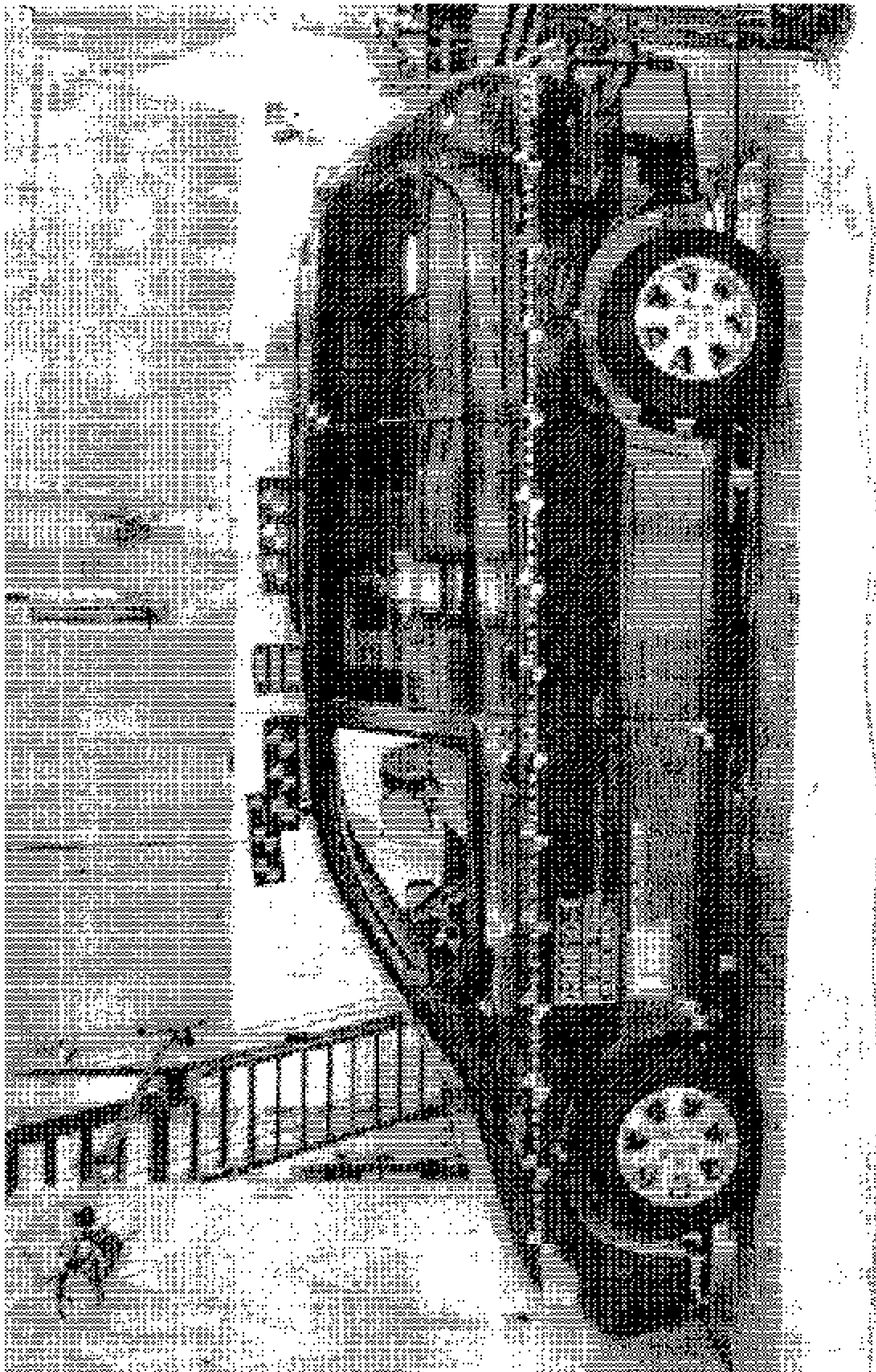


Image 3 Pre-Test Left Side View

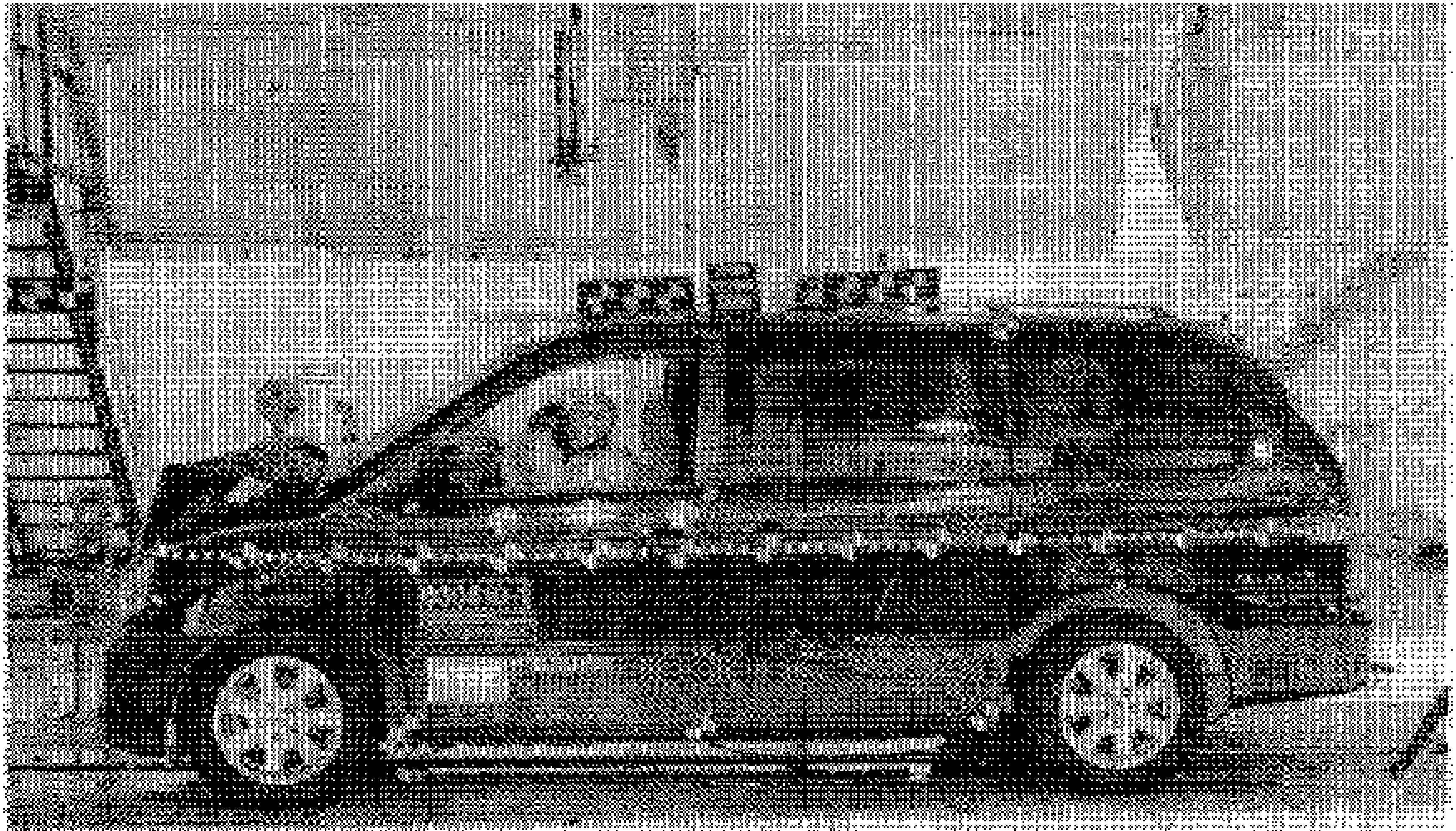


Image 4 Post-Test Left Side View

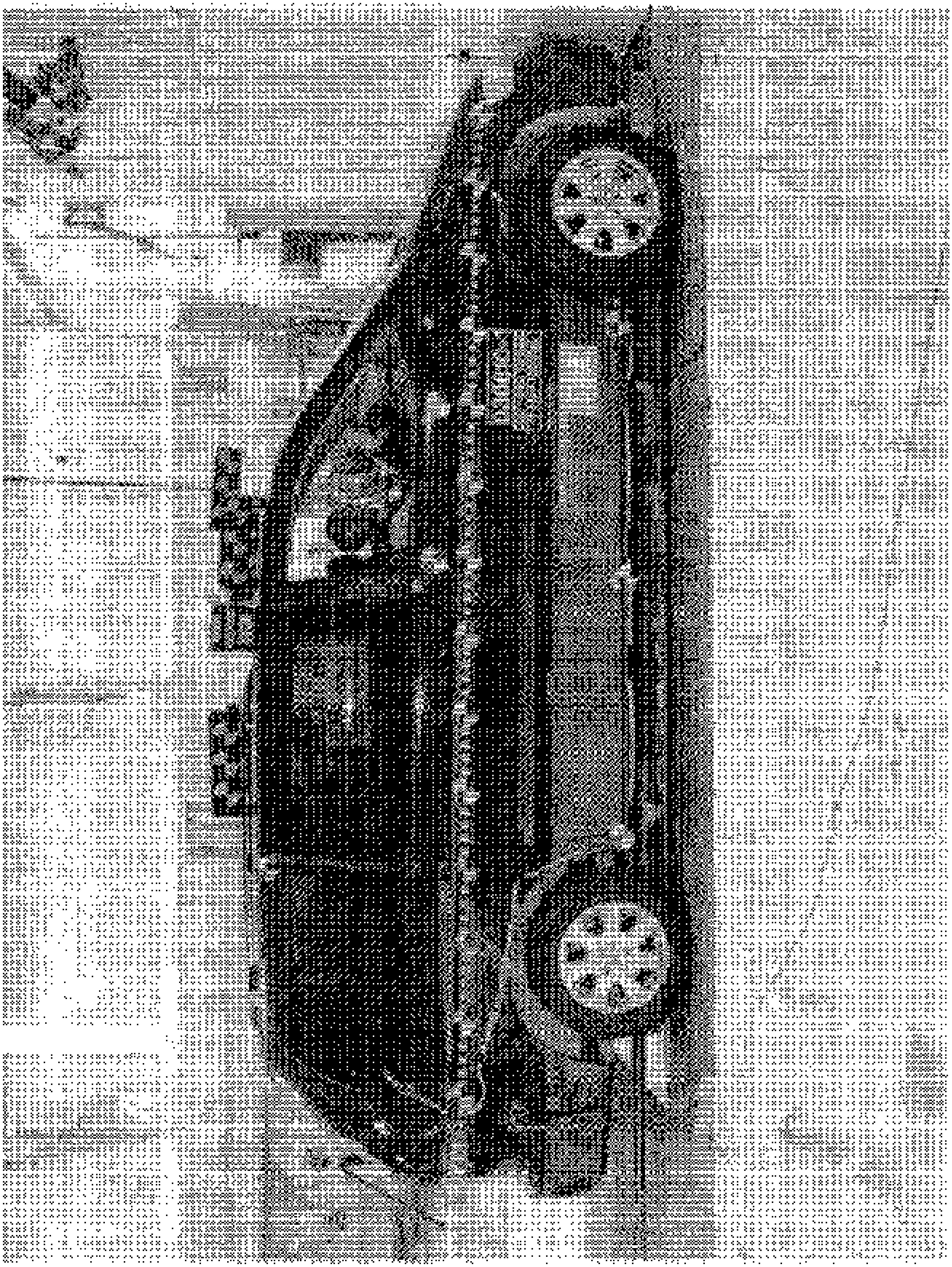


Image 5 Pre-Test Right Side View

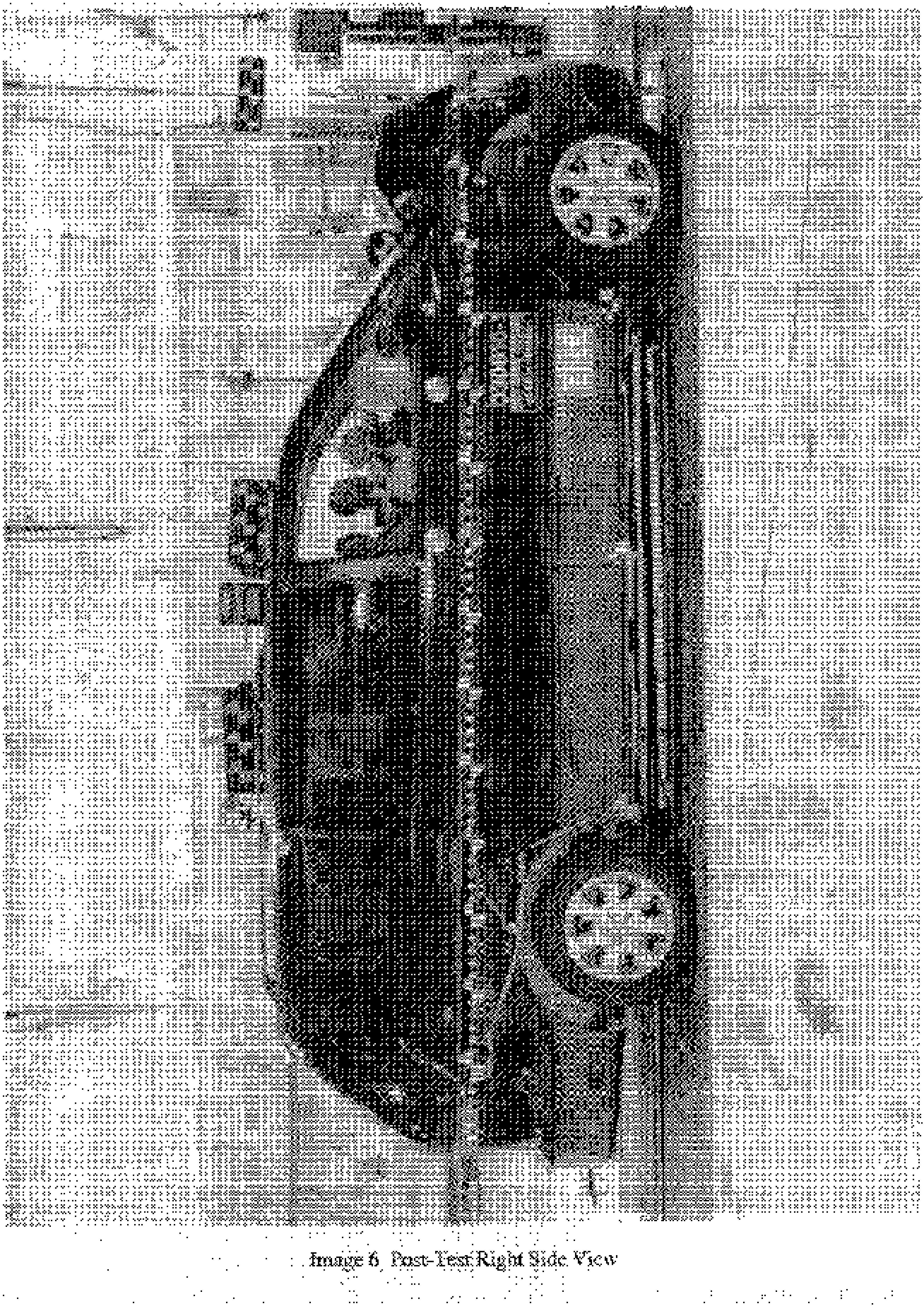


Image 6 Post-Test Right Side View

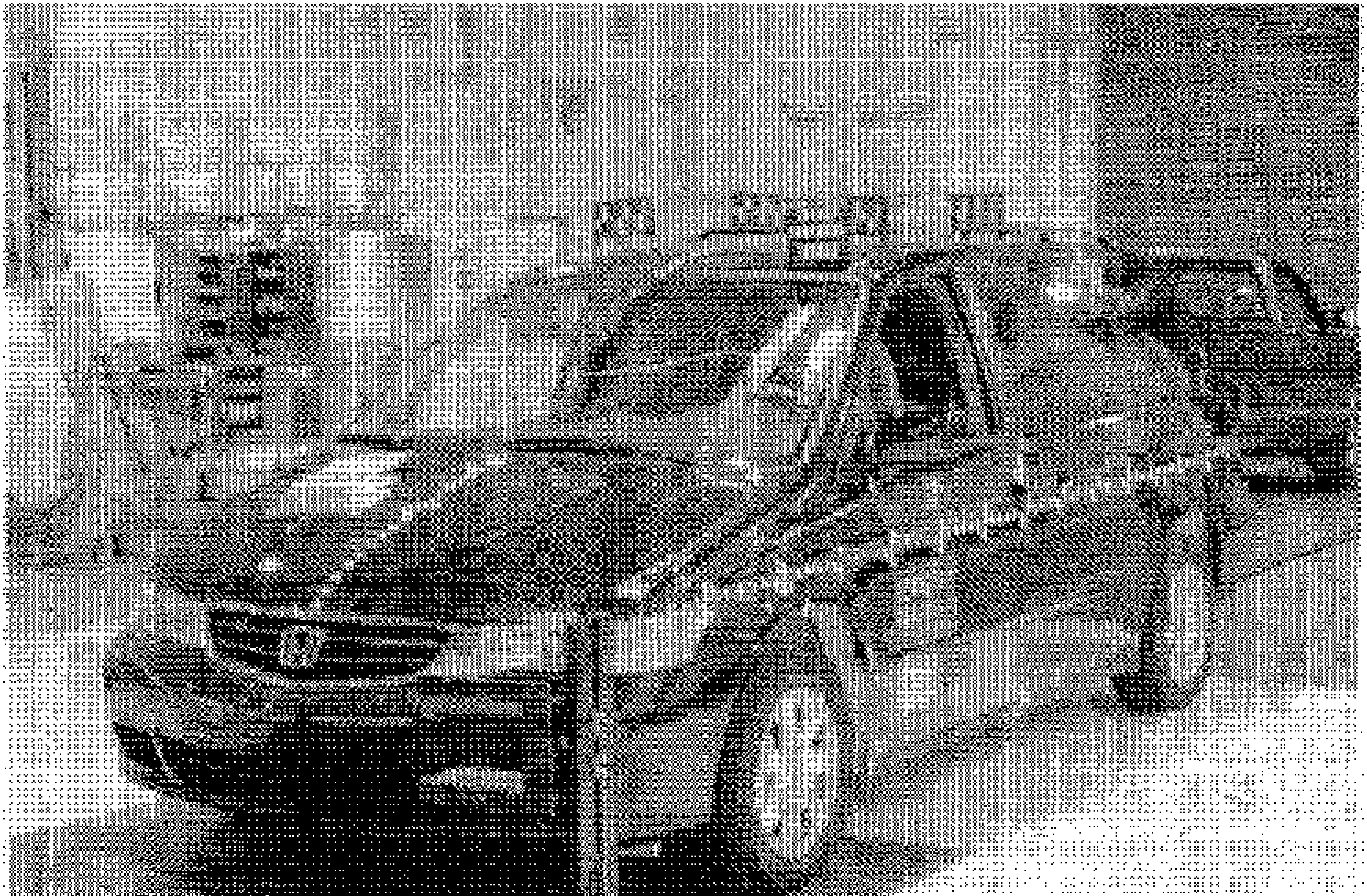


Image 7. Pre-Test Left Front Three-Quarter View

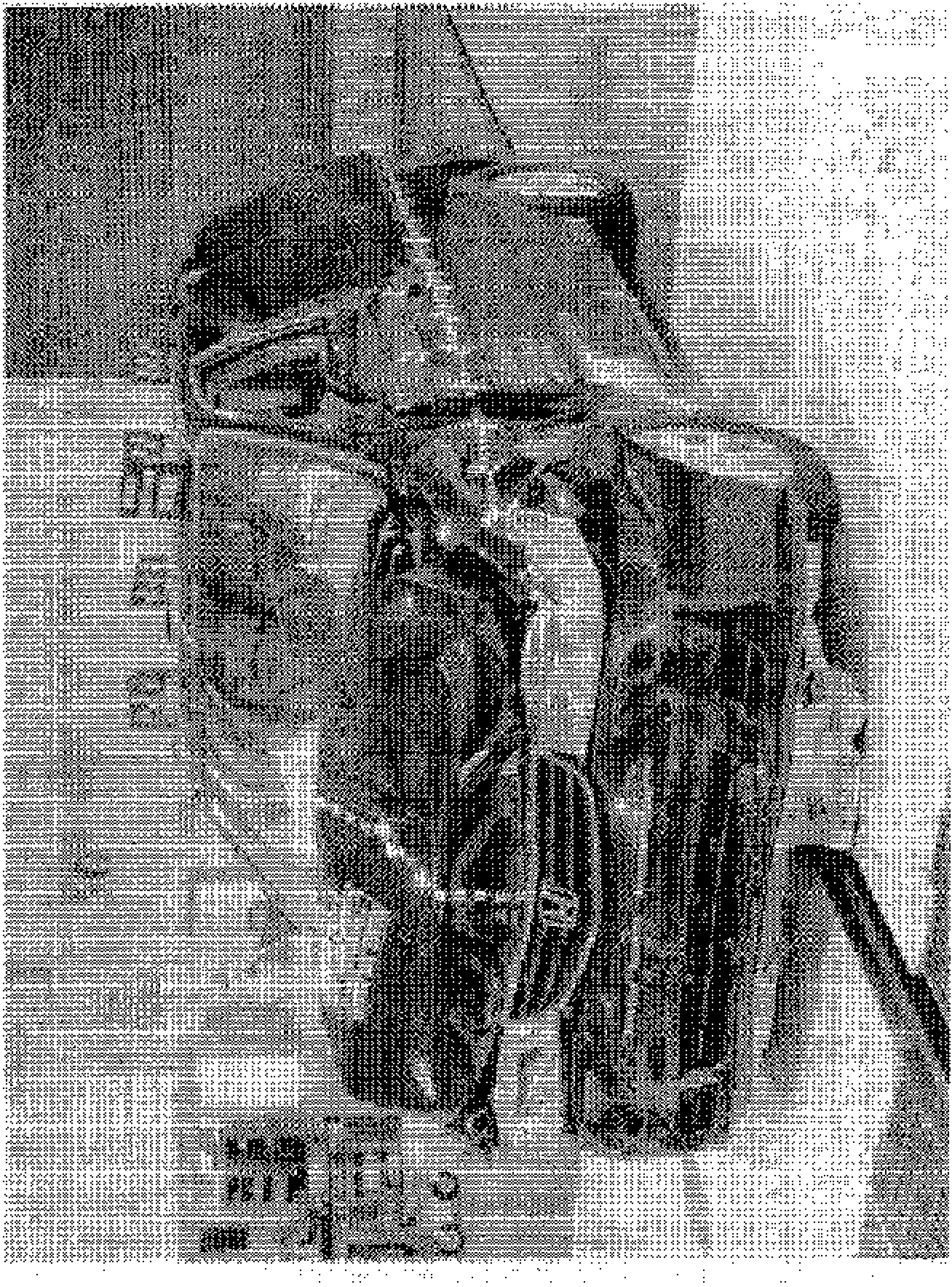


Image 8 Post-Test Left Front Three-Quarter View

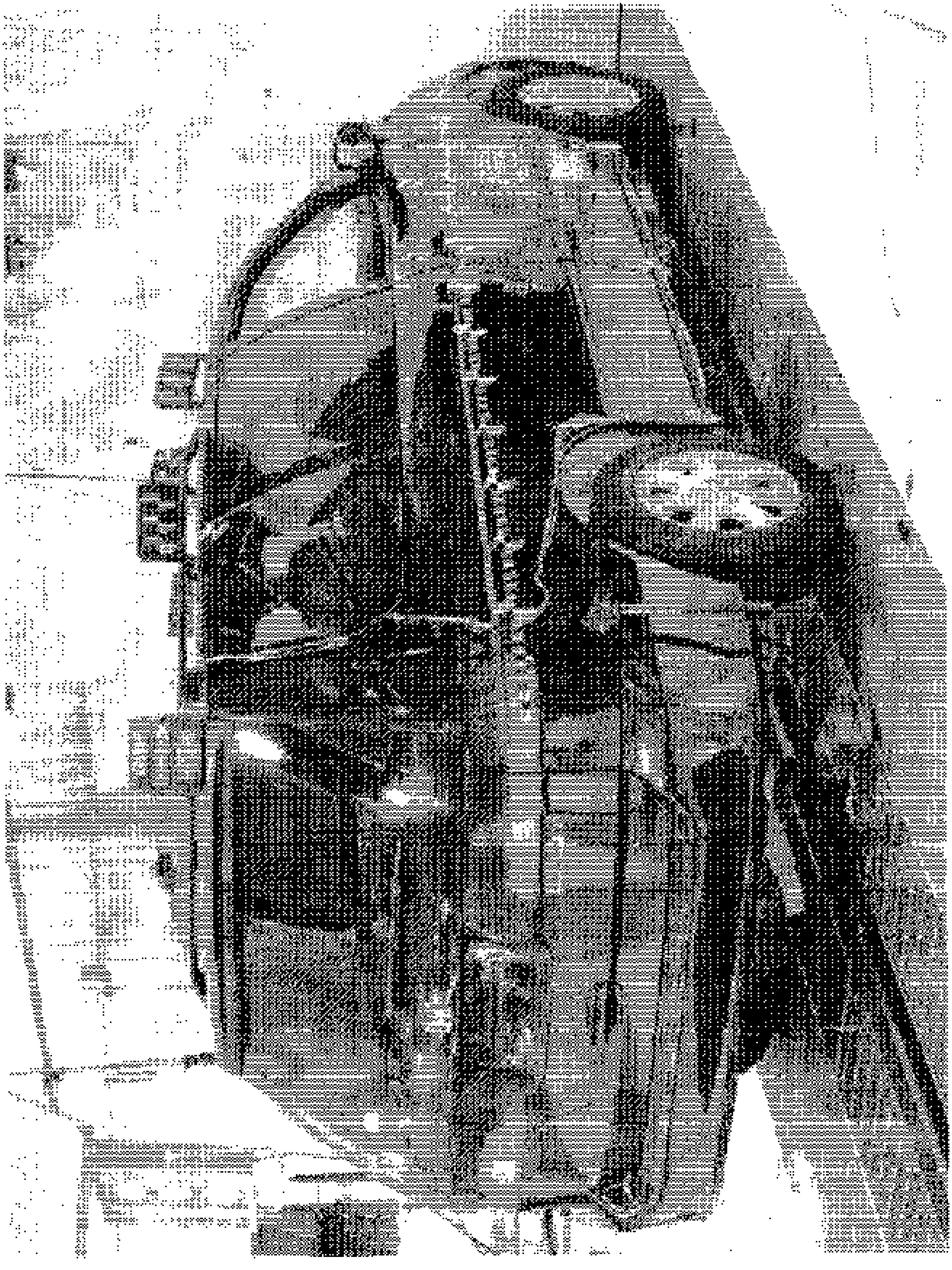


Image 9 Pre-Test Right Rear Three-Quarter View

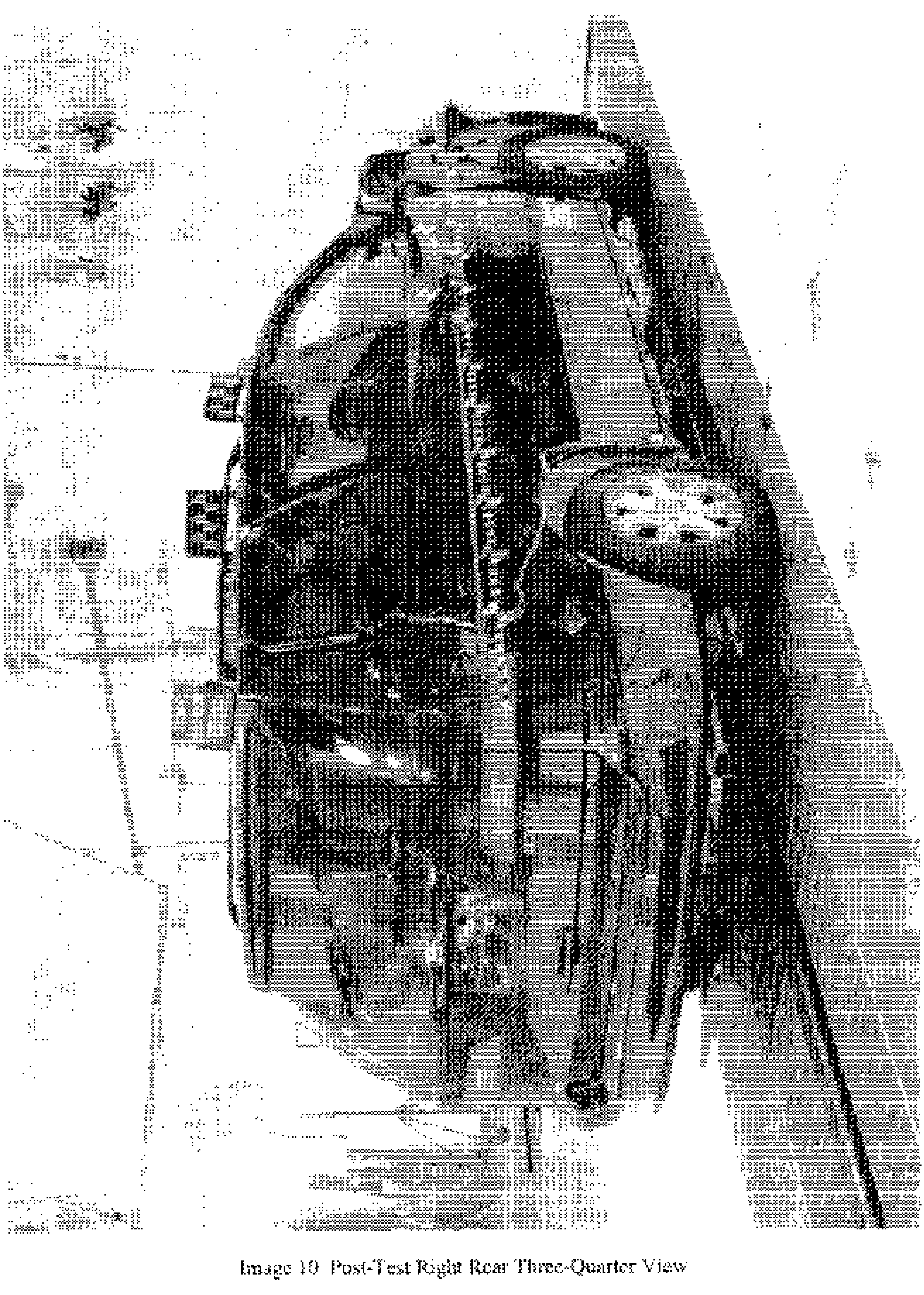


Image 10 Post-Test Right Rear Three-Quarter View

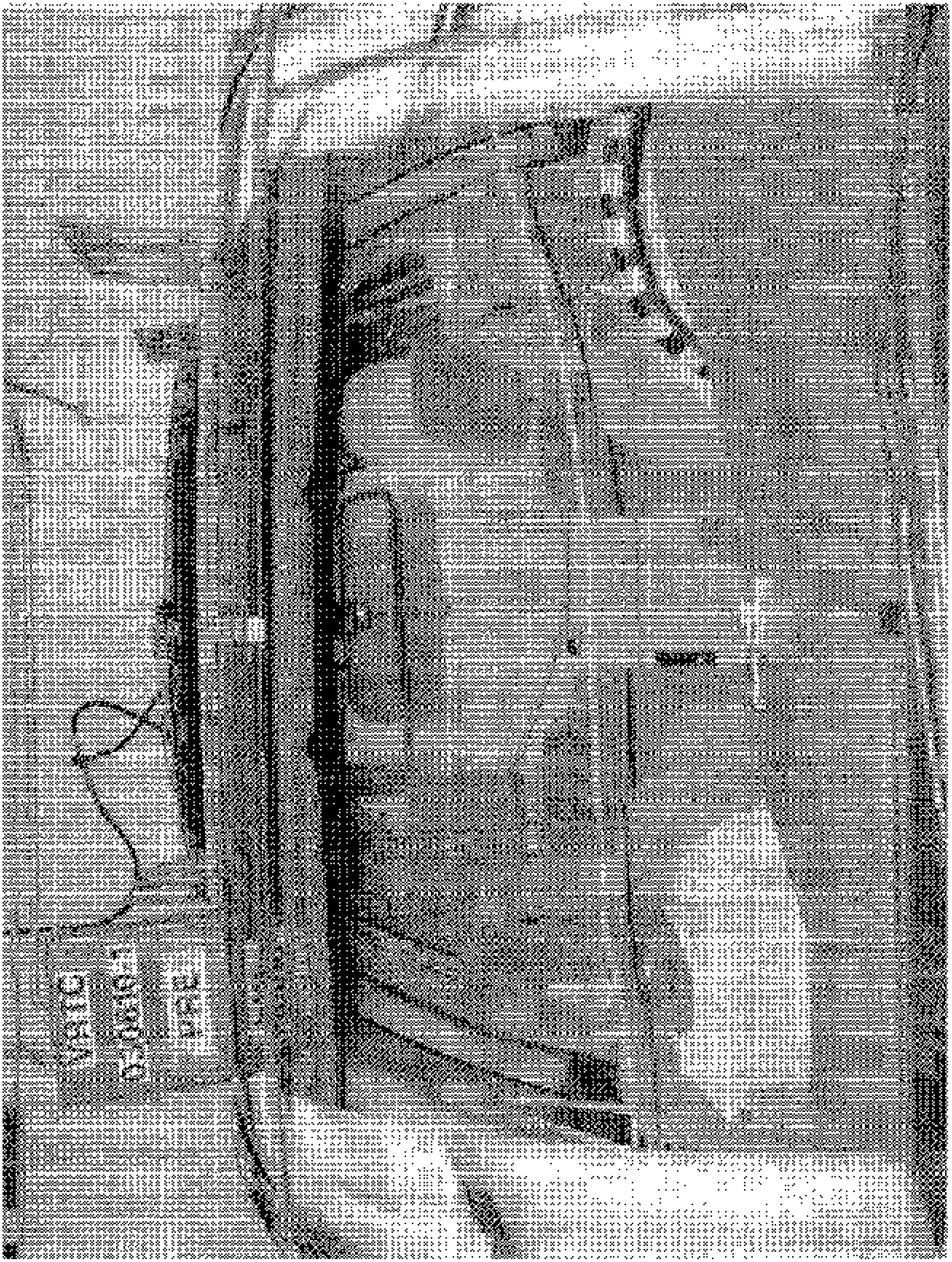


Image 11. Pre-Test Windshield View

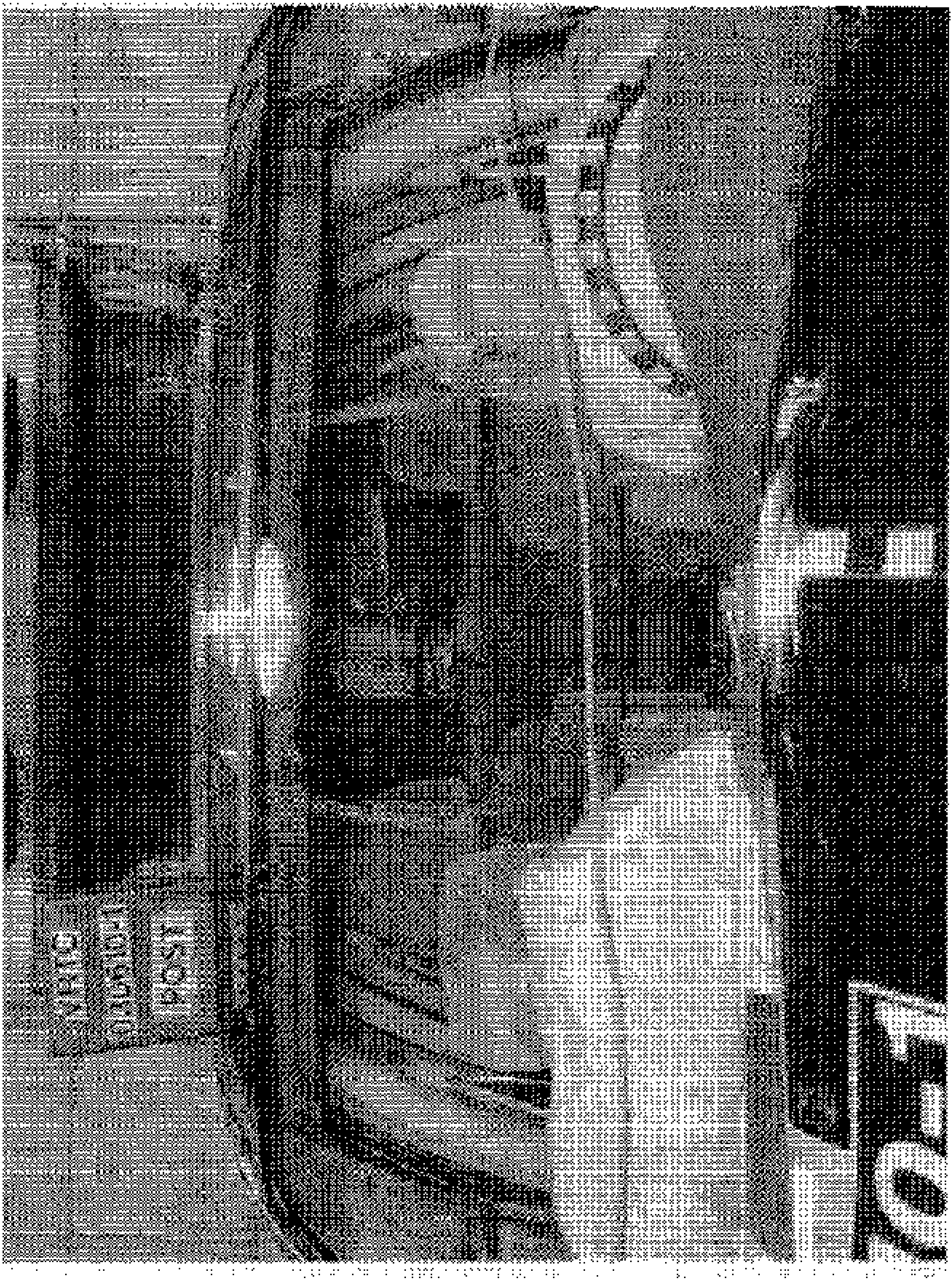


Image 12. Post-Test Windshield View

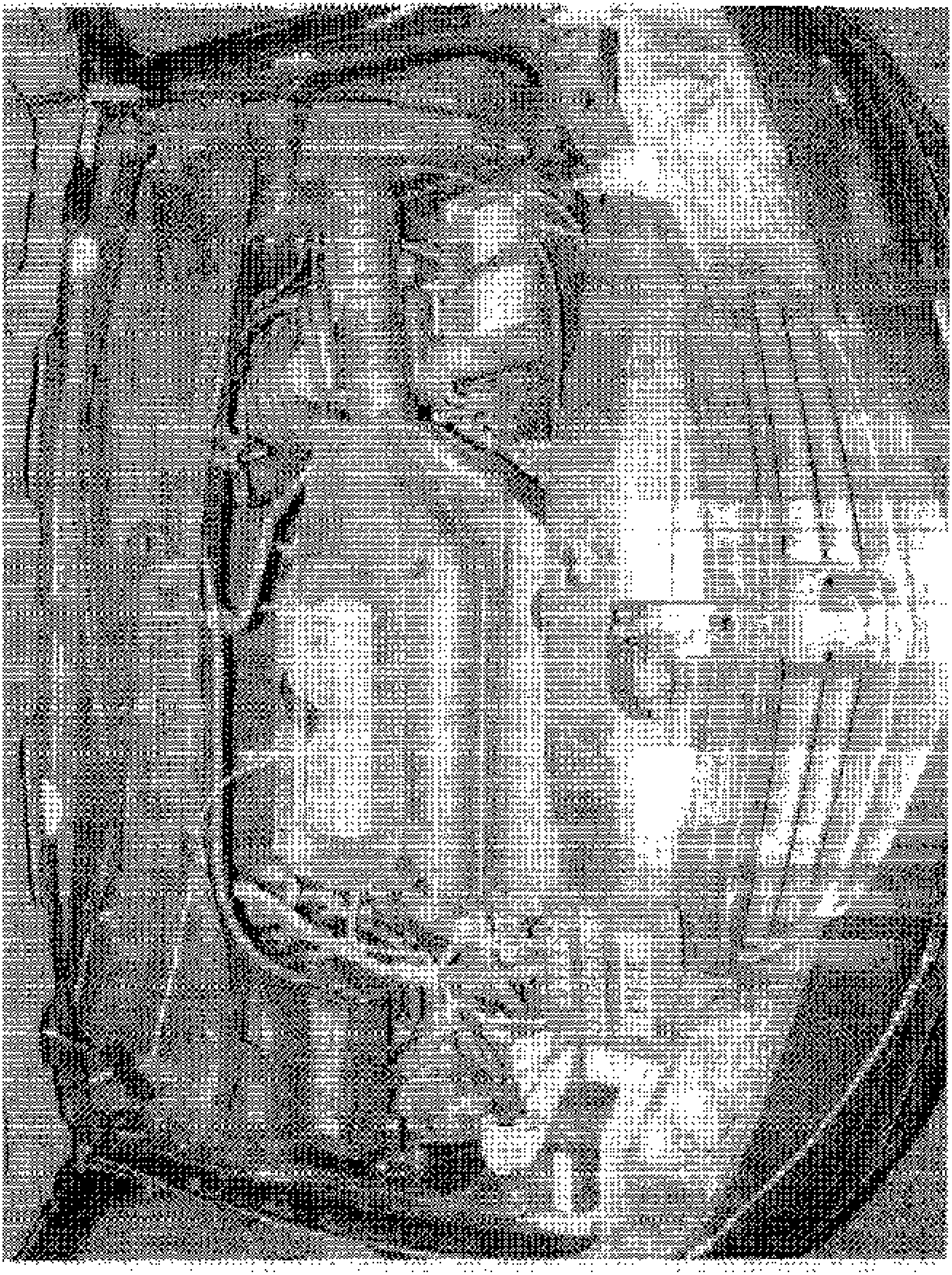


Image 13: Pre-Test Engine Compartment View

Image 14. Post-Test Engine Compartment View

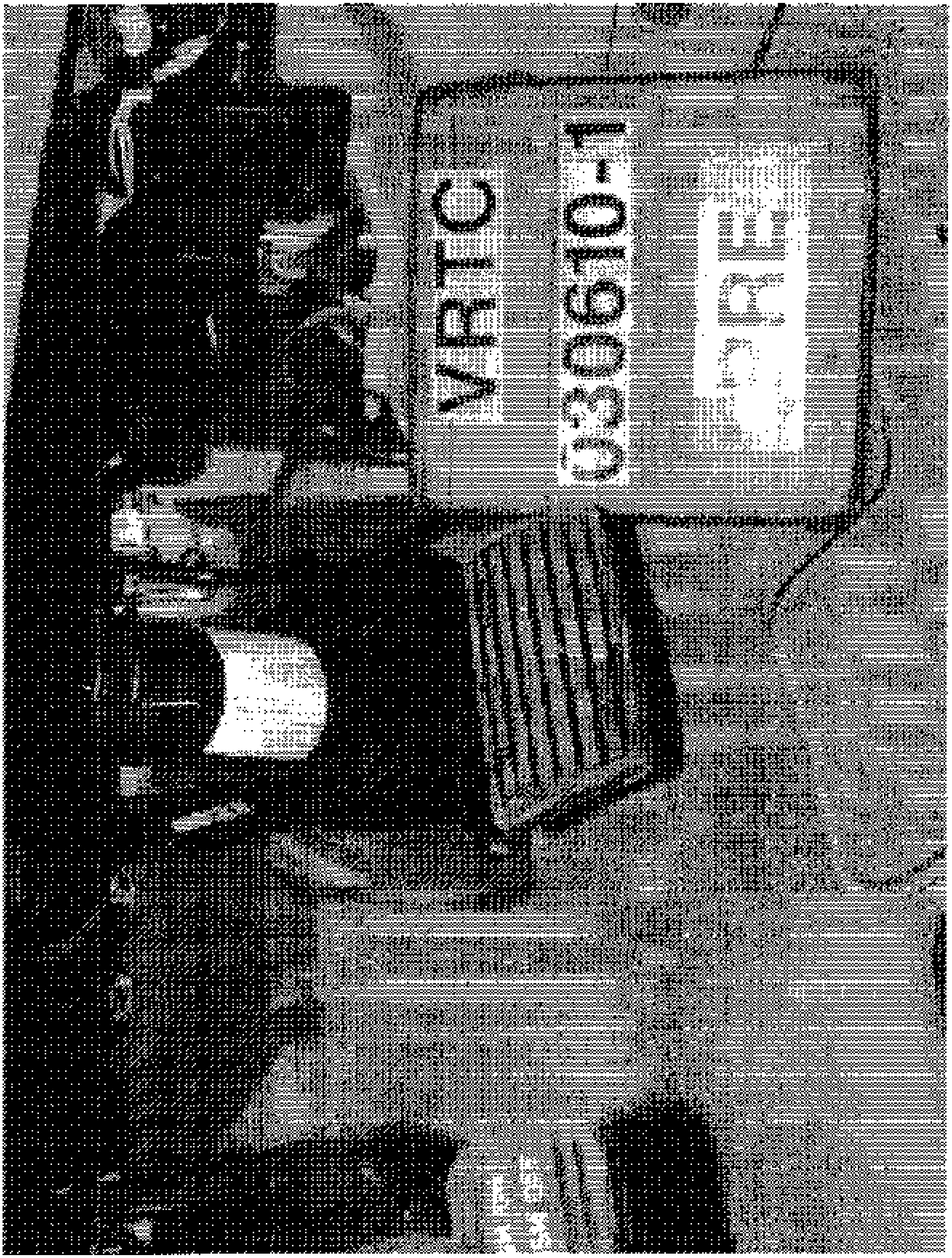


Image 15 Pre-Test Steering Column and Firewall - Interior View

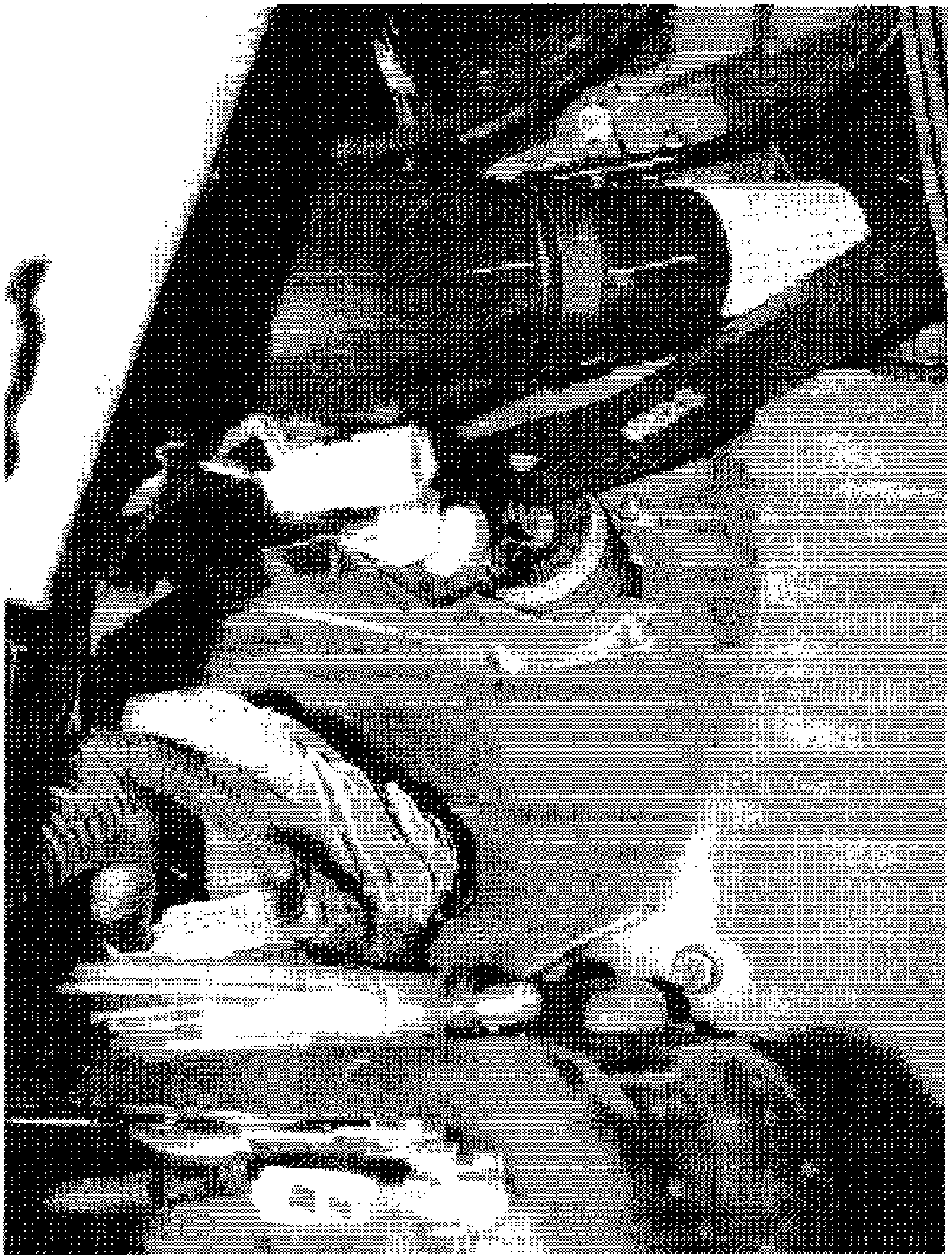


Image 16 Post-Test Steering Column and Firewall - Interior View

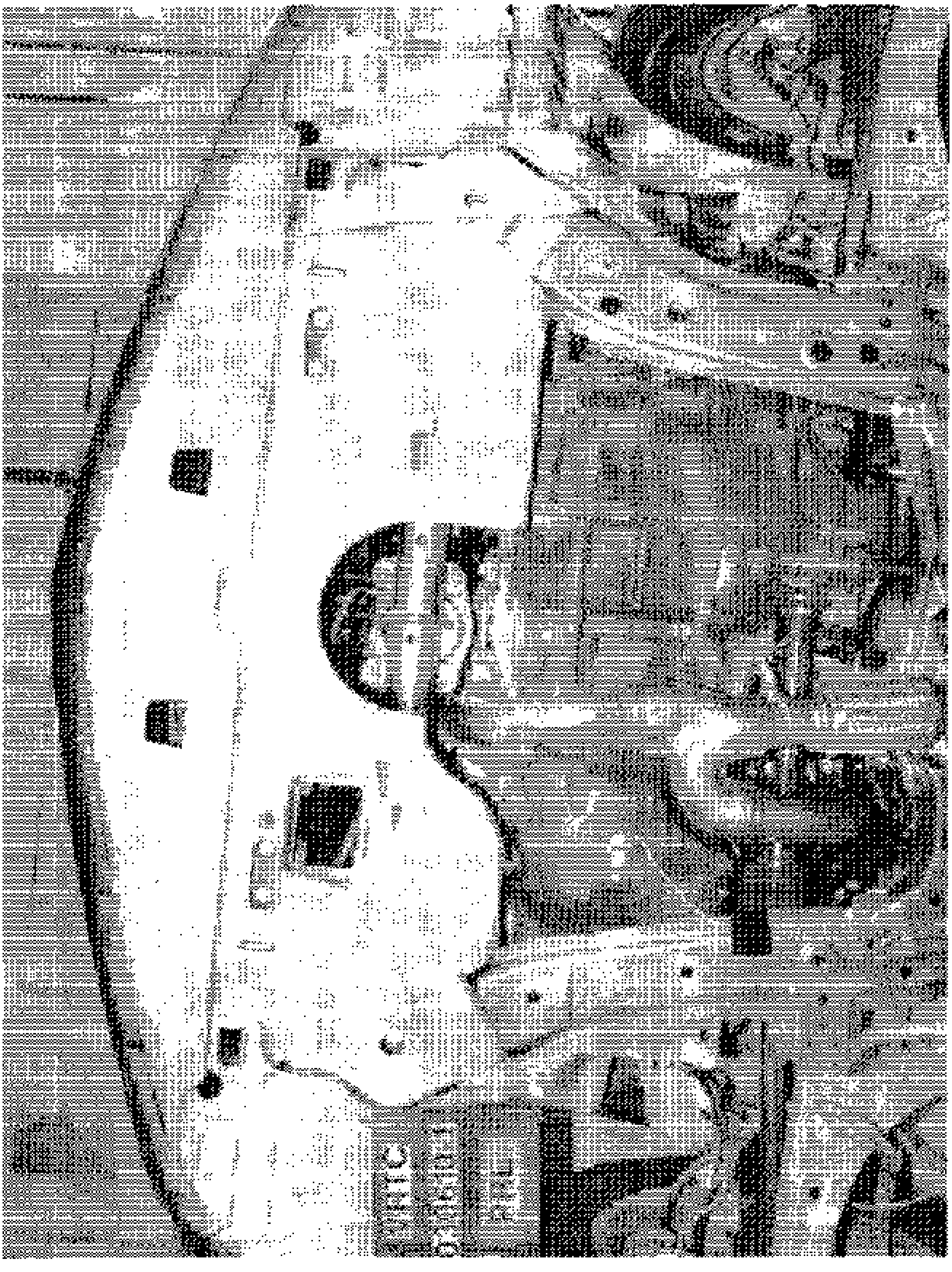


Image 17 Pre-Test Front Underbody View

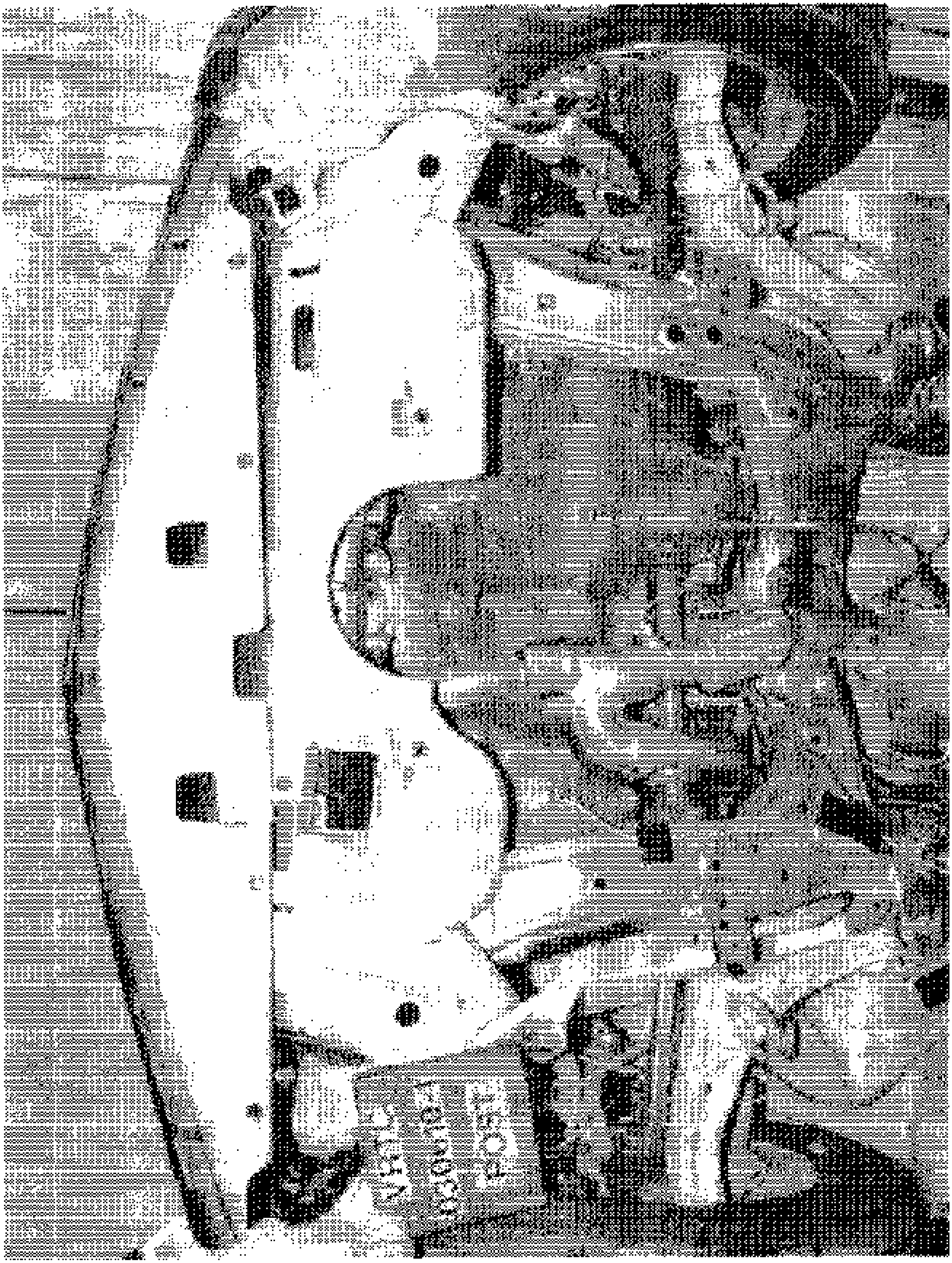


Image 18 Post-Test Front Underbody View

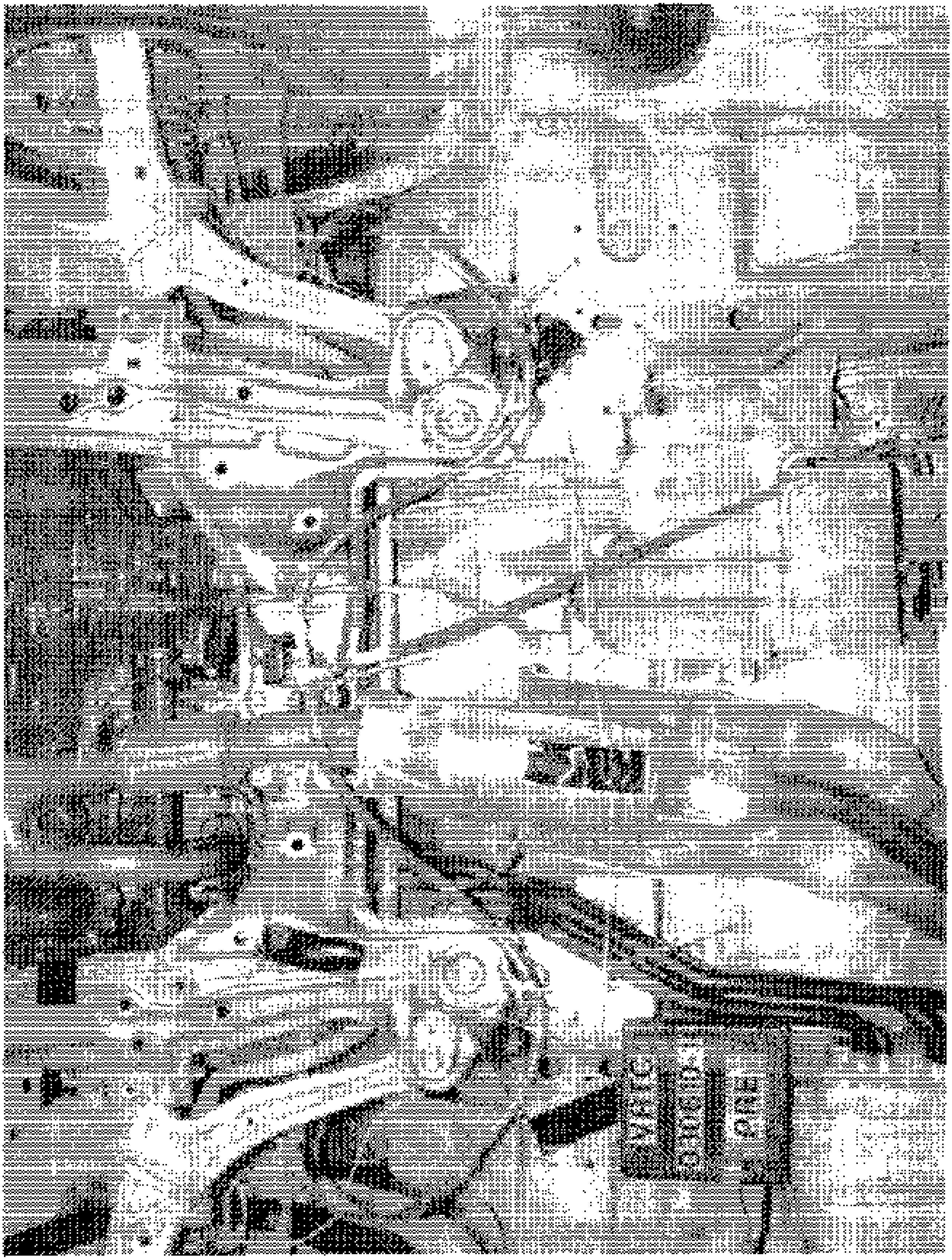


Image 19 Pre-Test Front Mid Underbody View

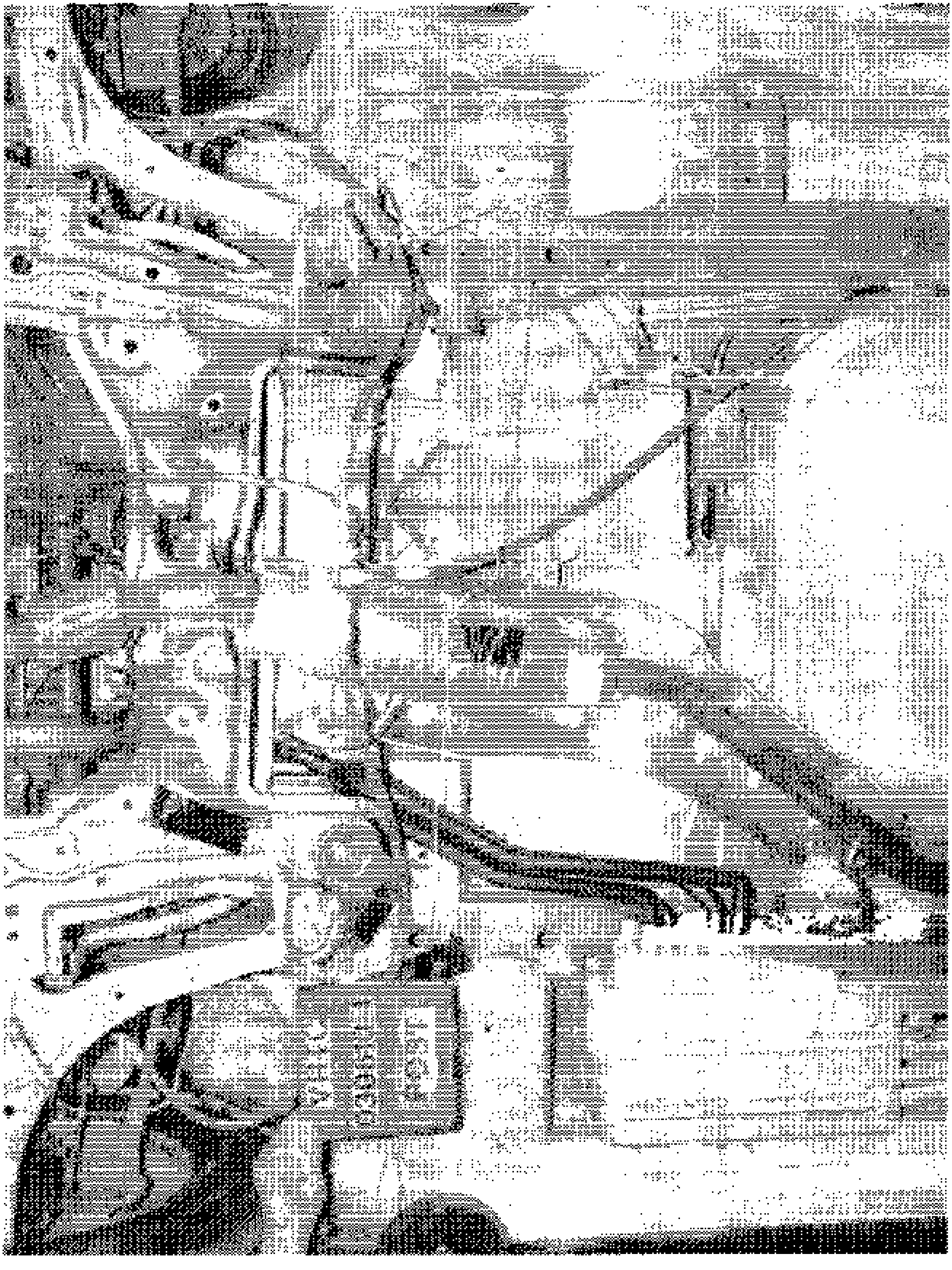


Image 20 Post-Test Front Mid Underbody View

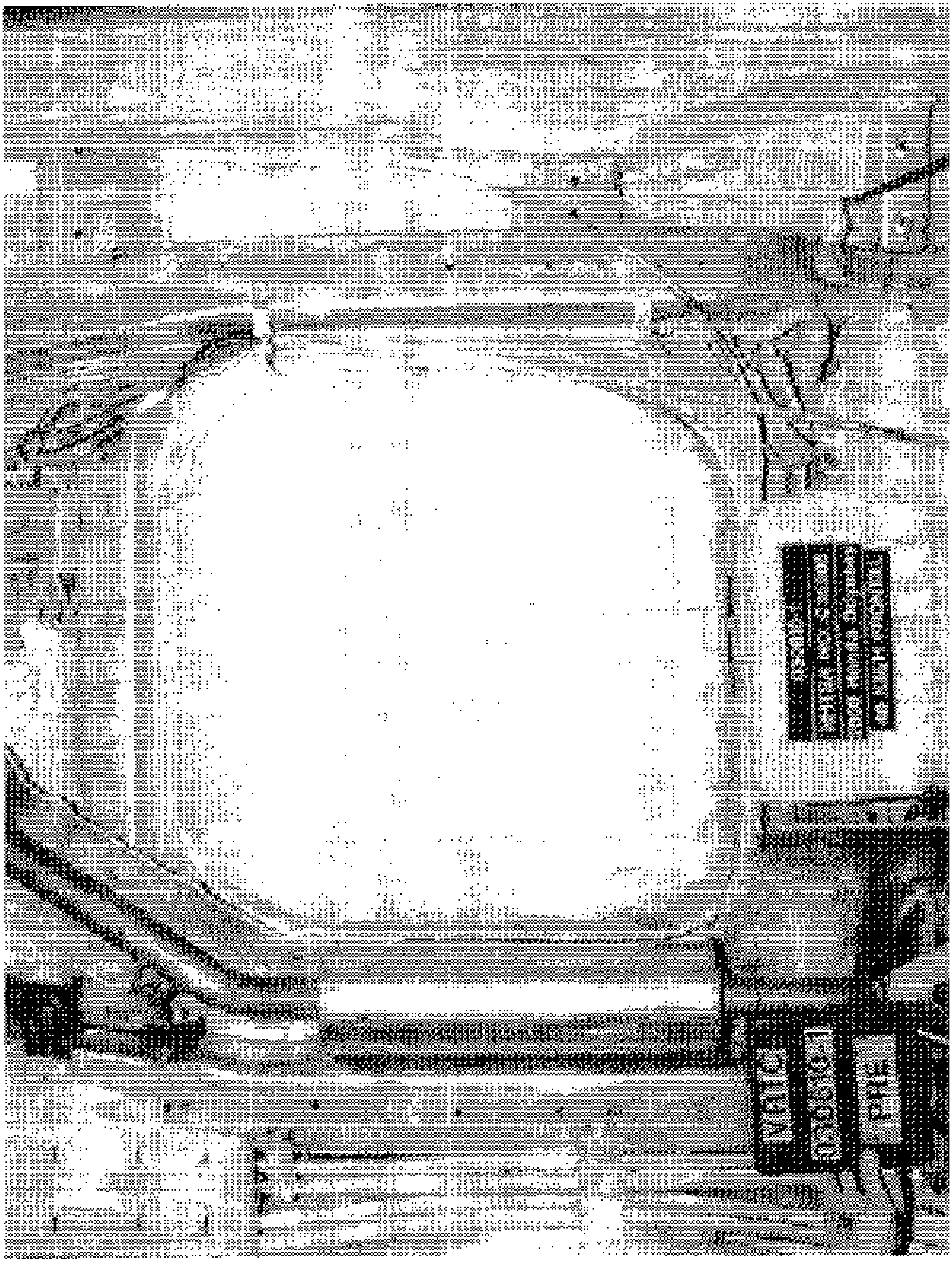


Image 21 Pre-Test Mid Underbody View

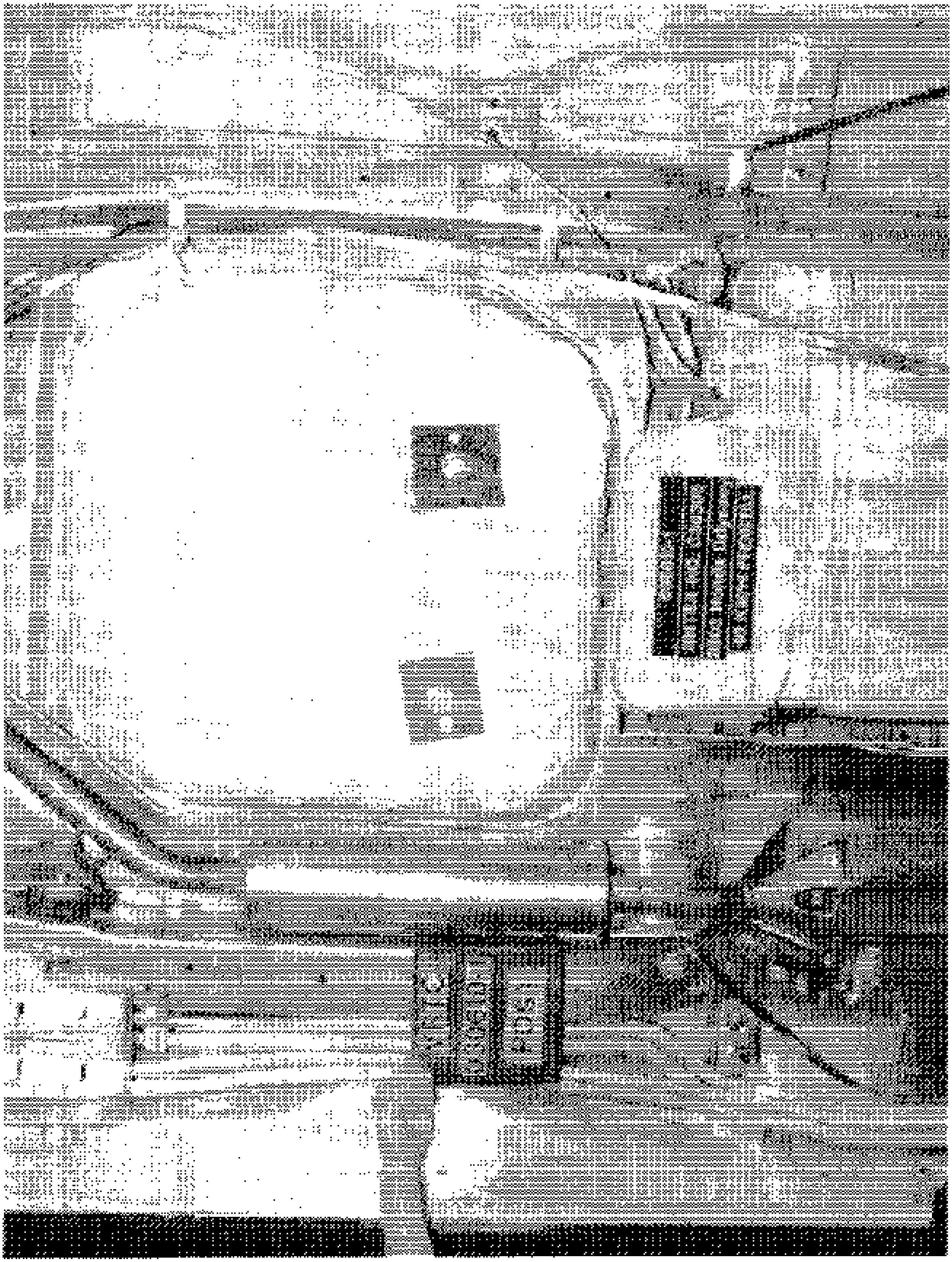


Image 22 Post-Test Mid Underbody View

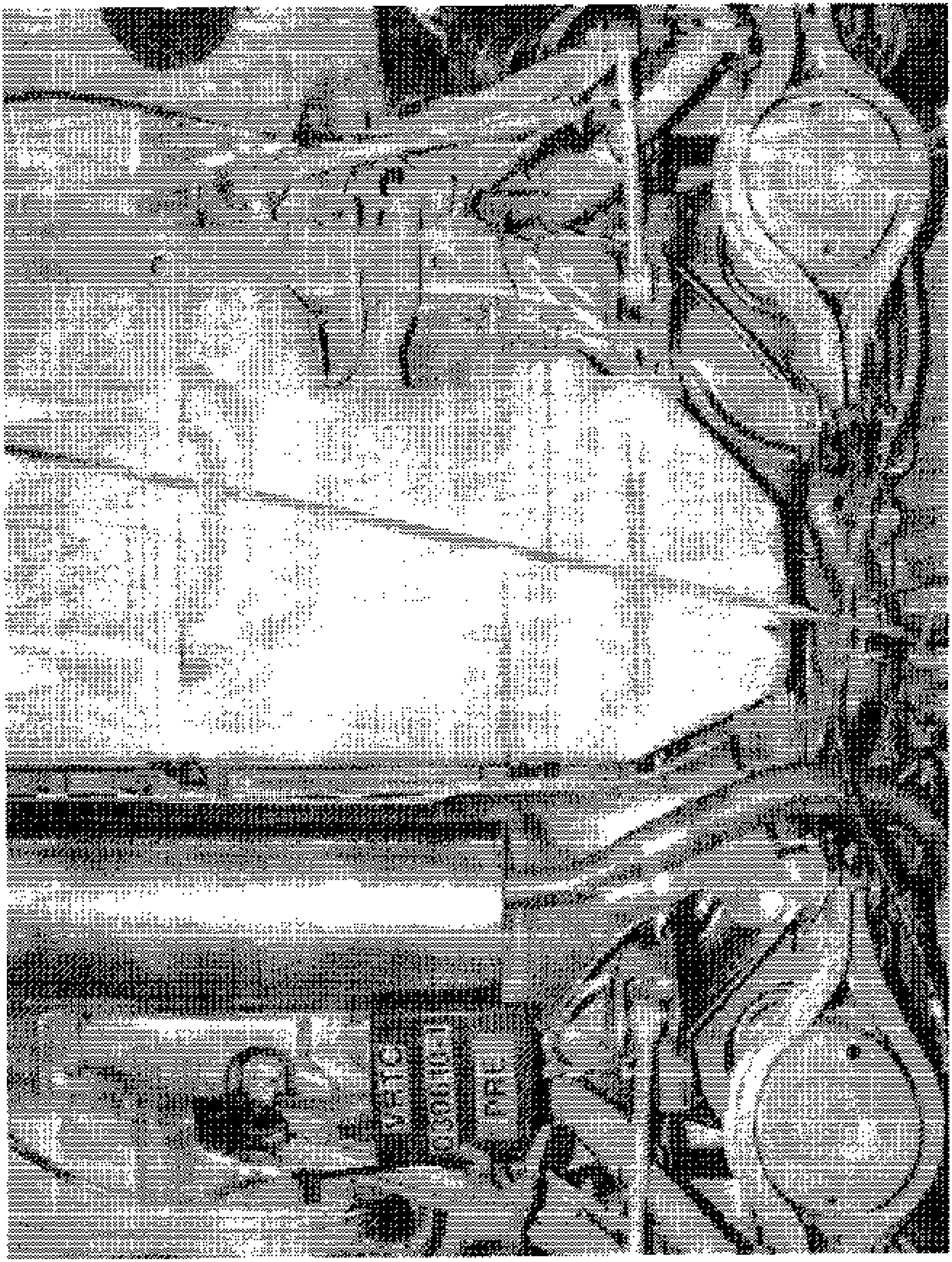


Image 23 Pre-Test Rear Mid Underbody View

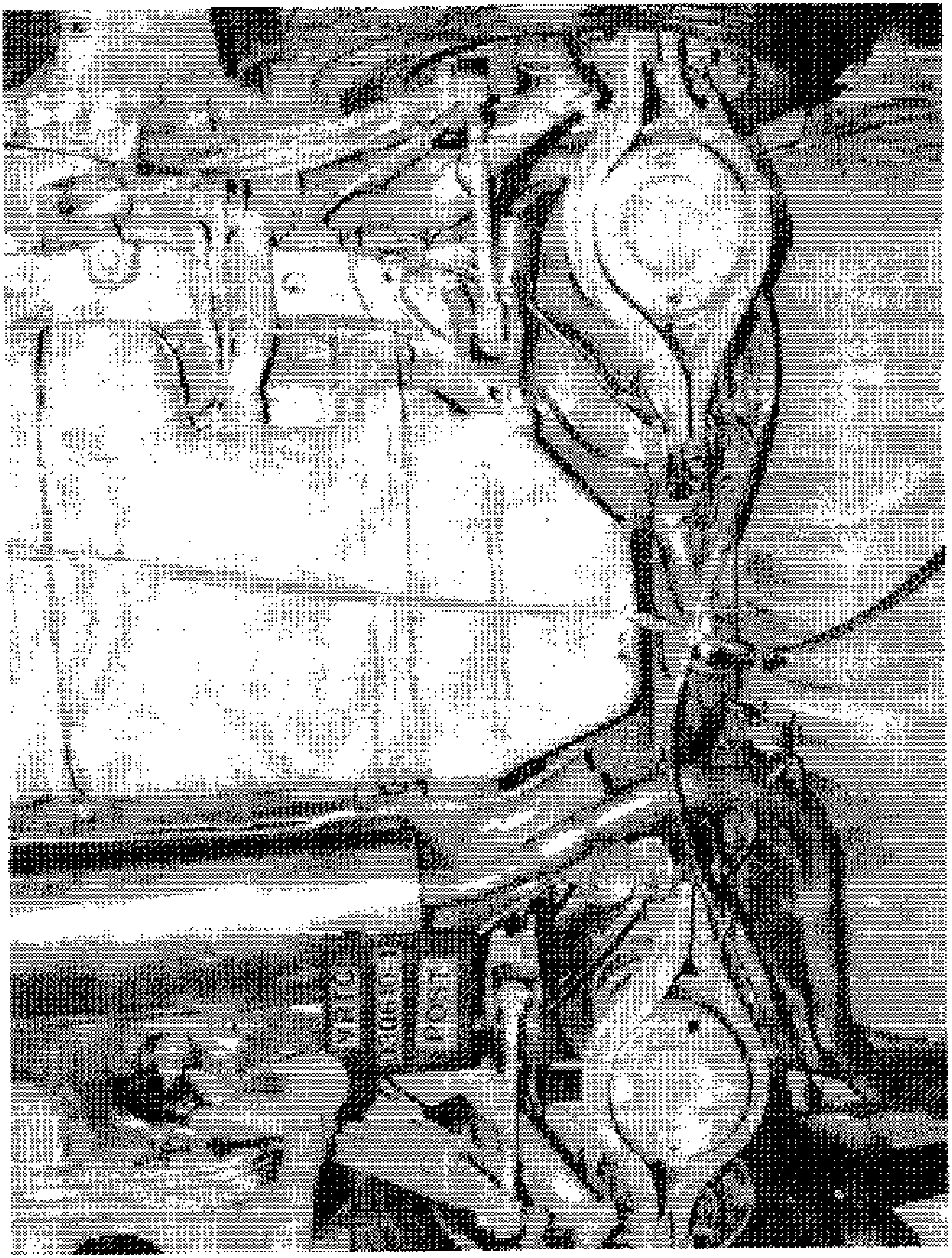


Image 24 Post-Test Rear Mid Underbody View

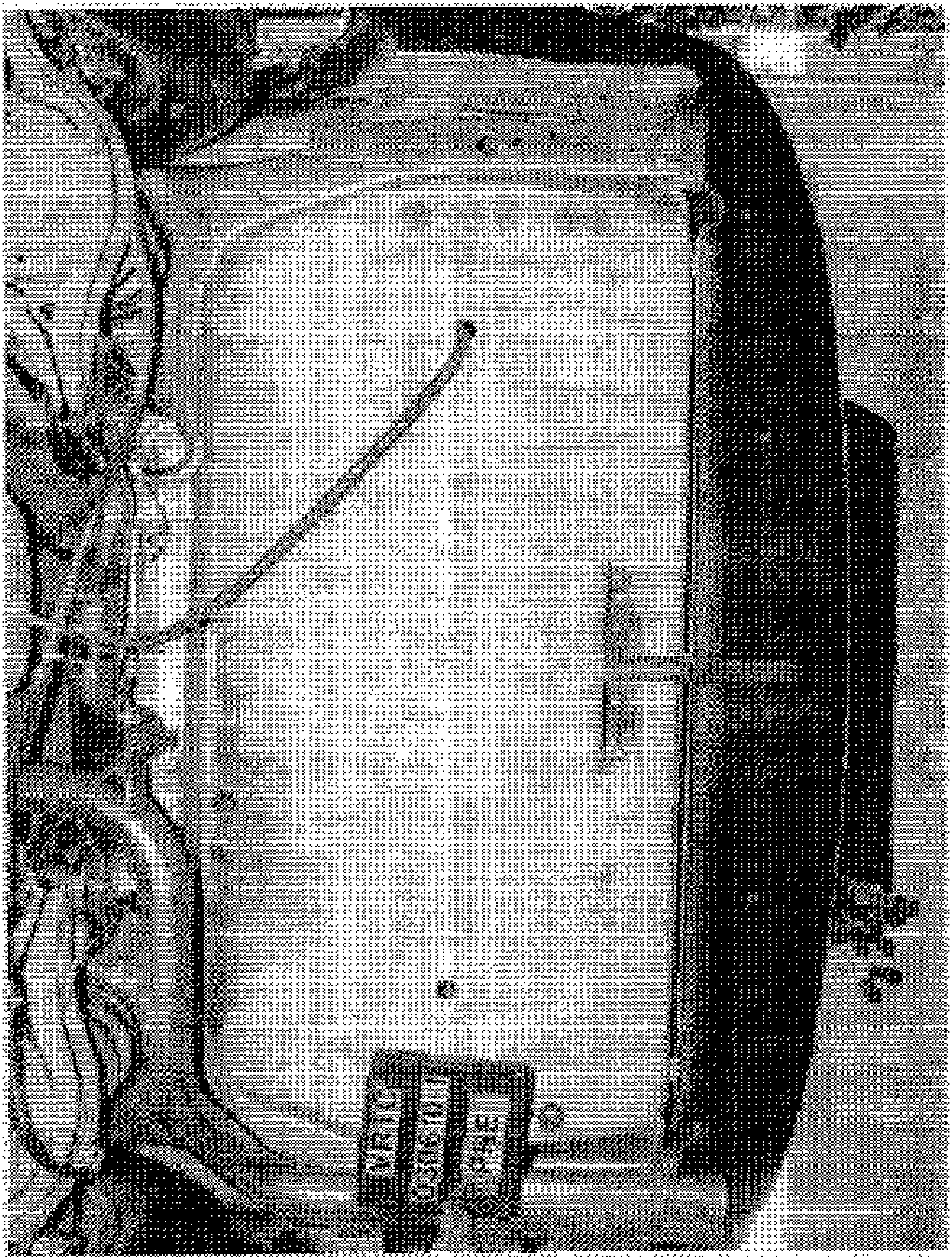


Image 25 Pre-Test Rear Underbody View

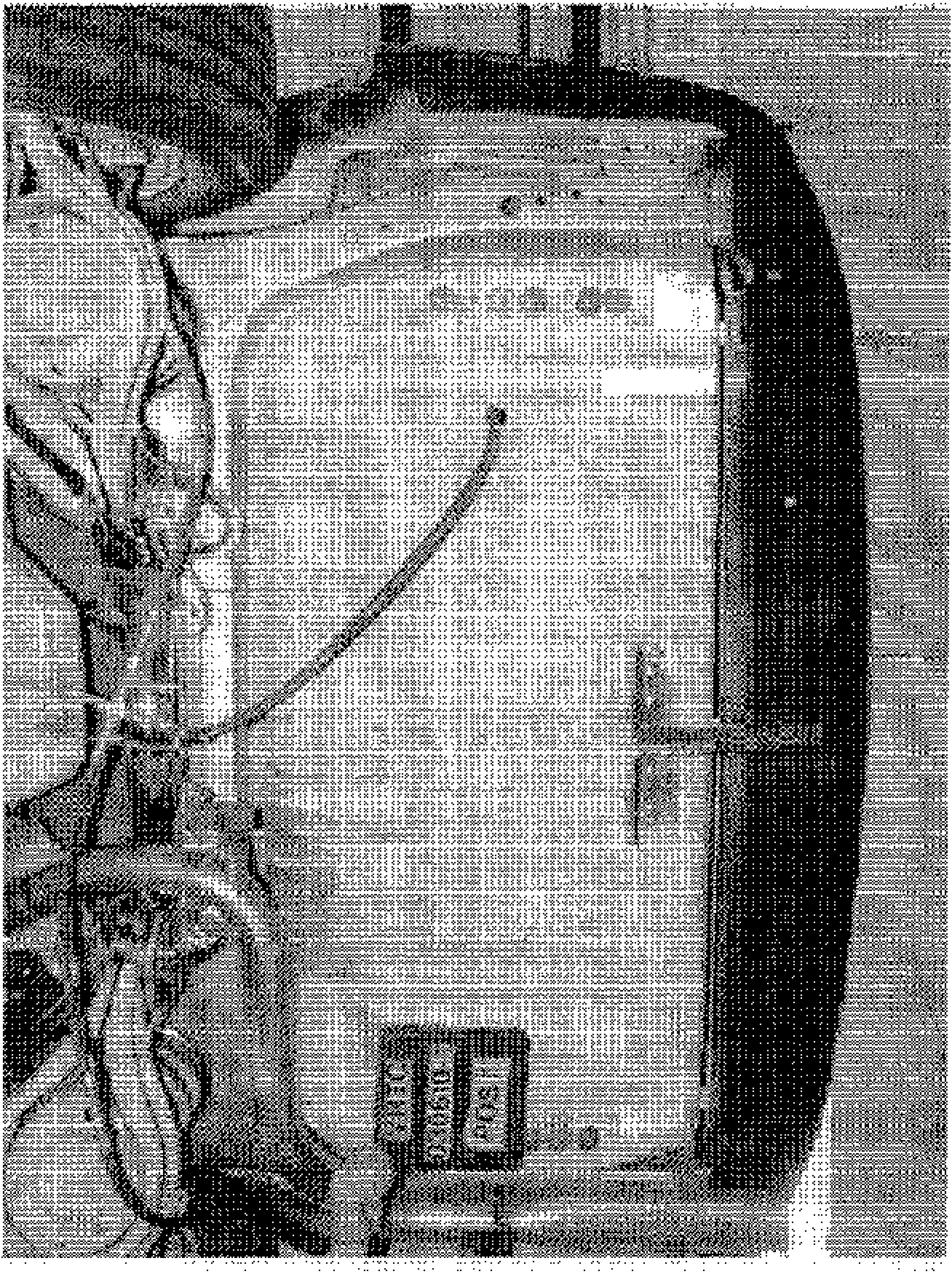


Image 26 Post-Test Rear Underbody View

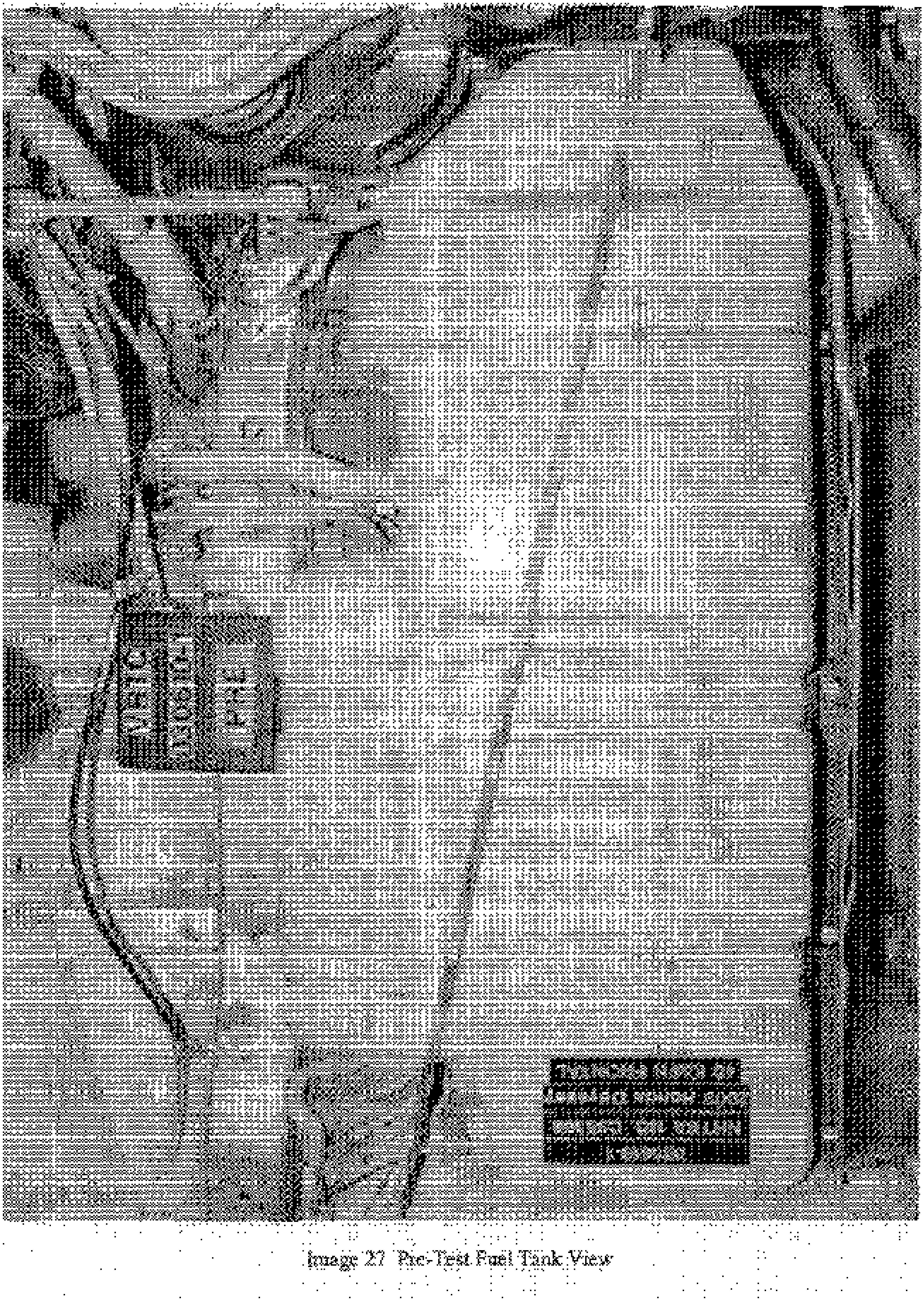


Image 27 Pre-Test Fuel Tank View

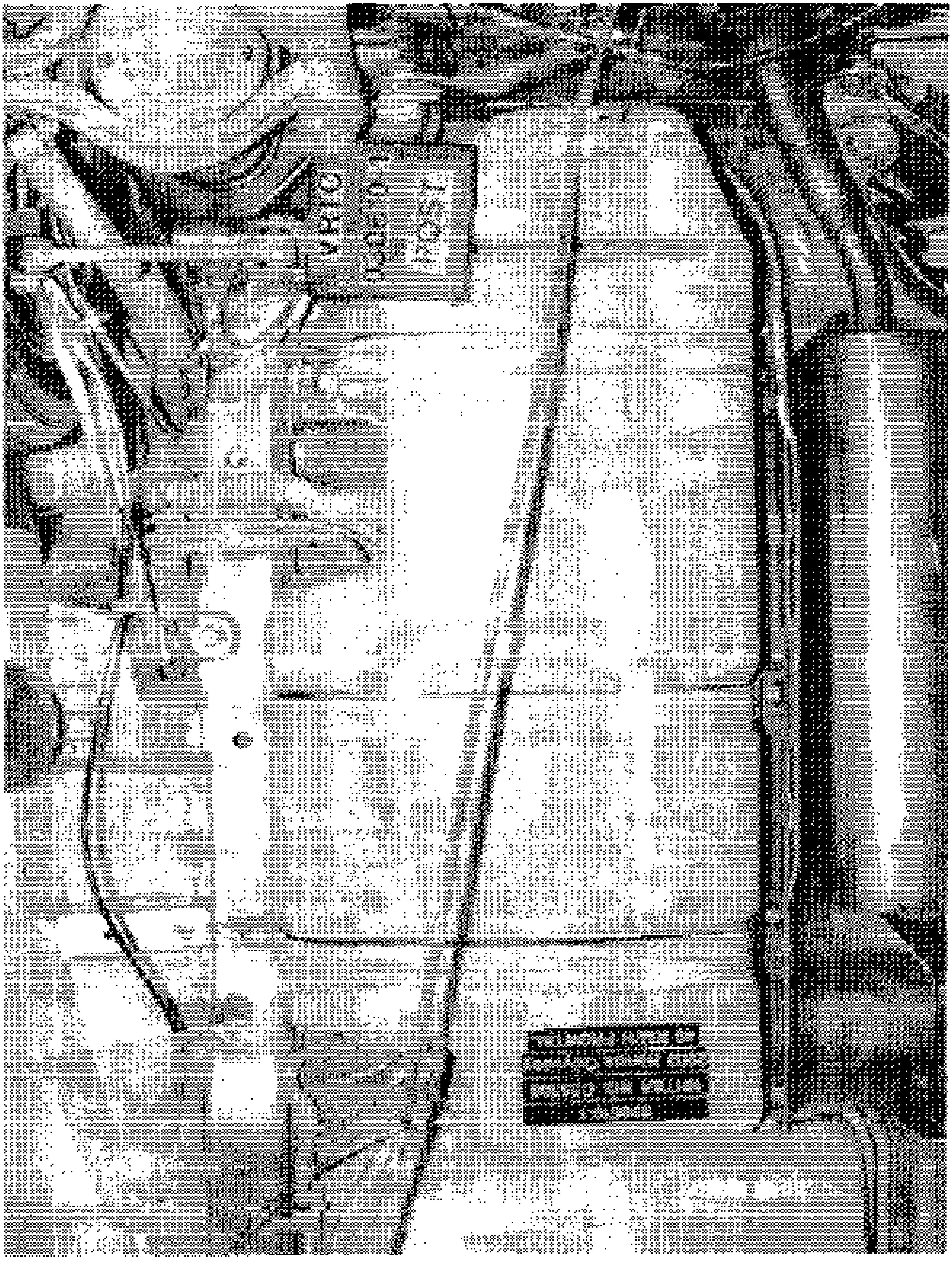


Image 28 Post-Test Fuel Tank View

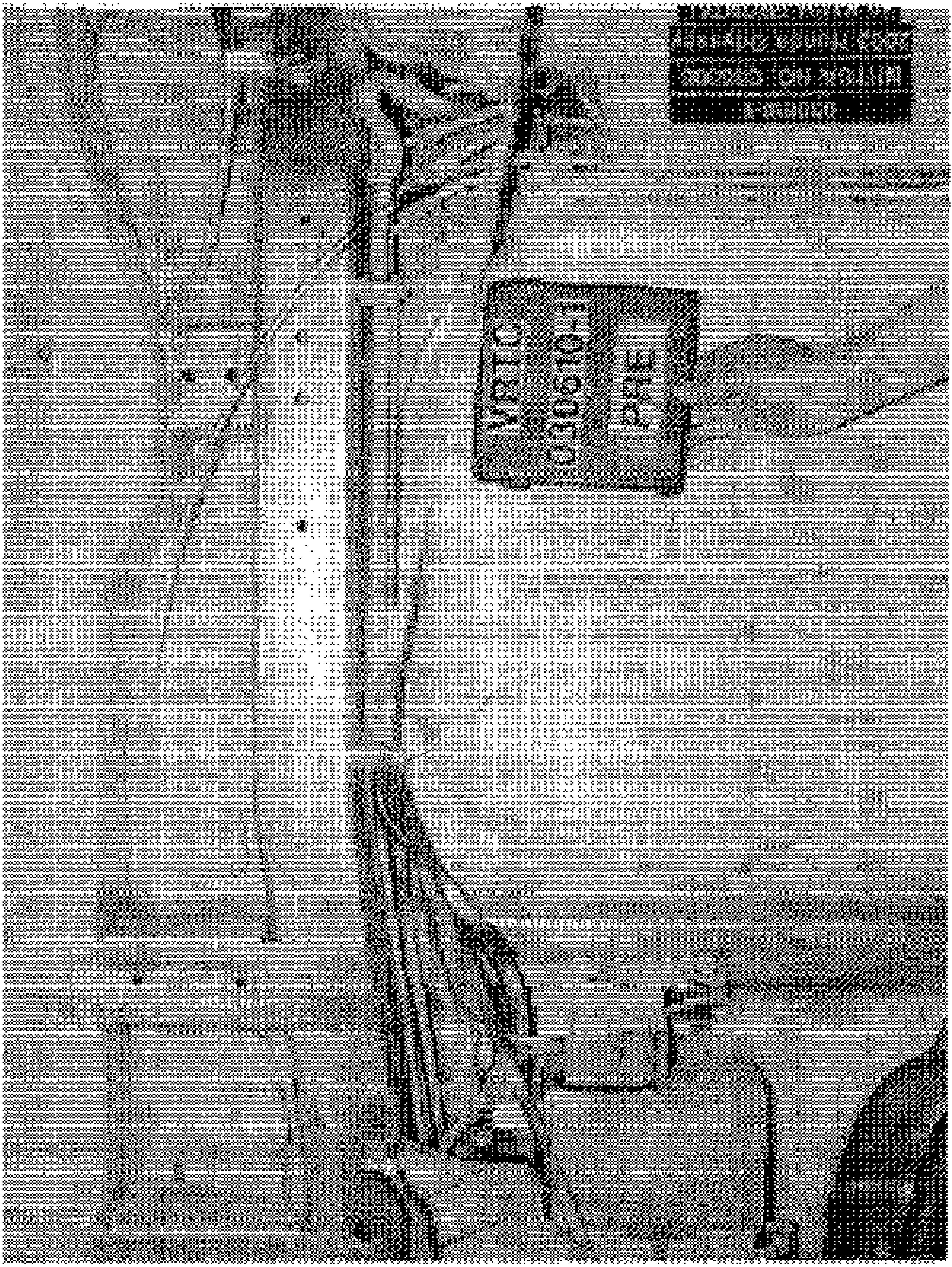


Image 29. Pre-Test Fuel Lines - View 1

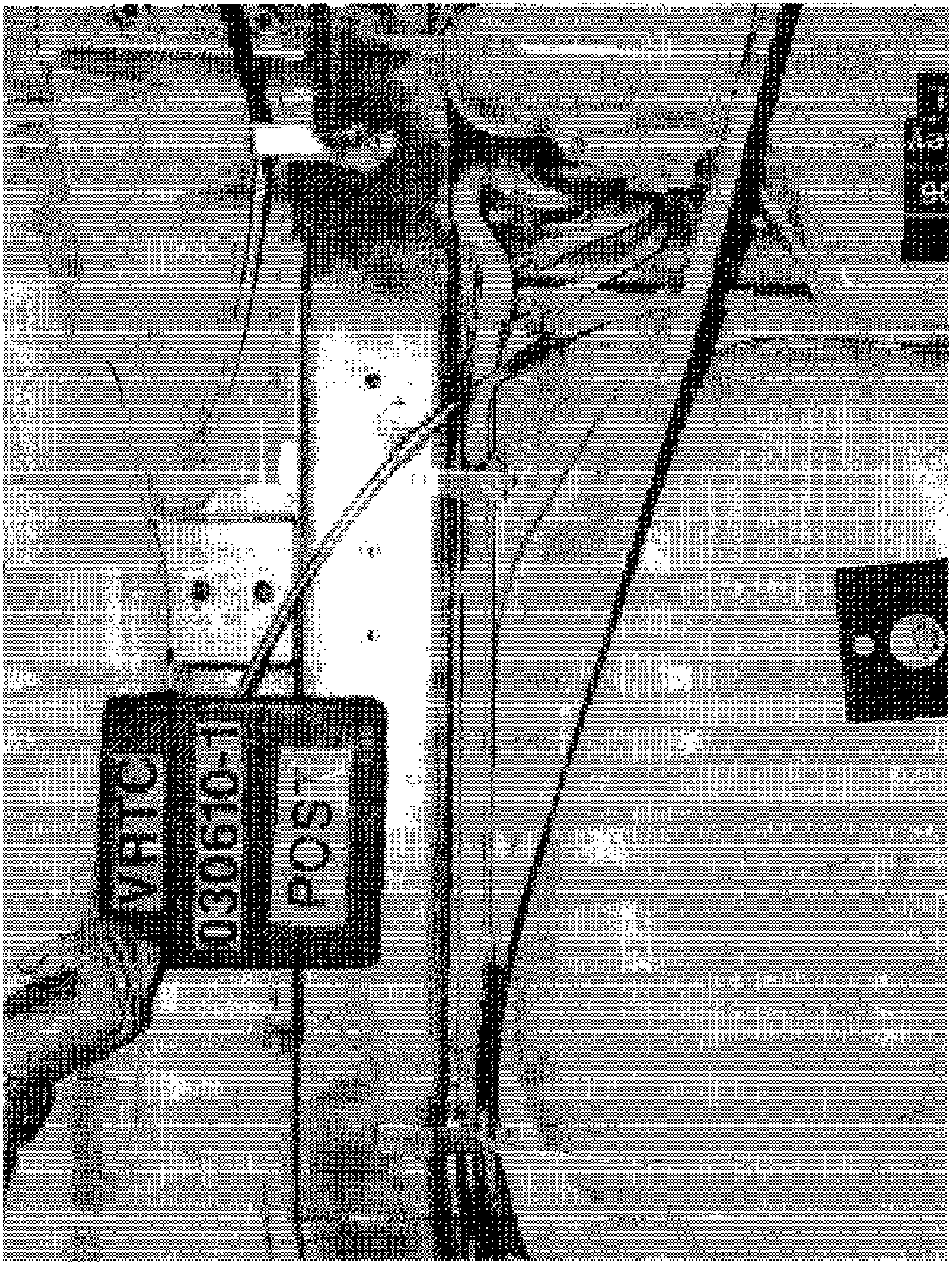


Image 30 Post-Test Fuel Lines - View 1

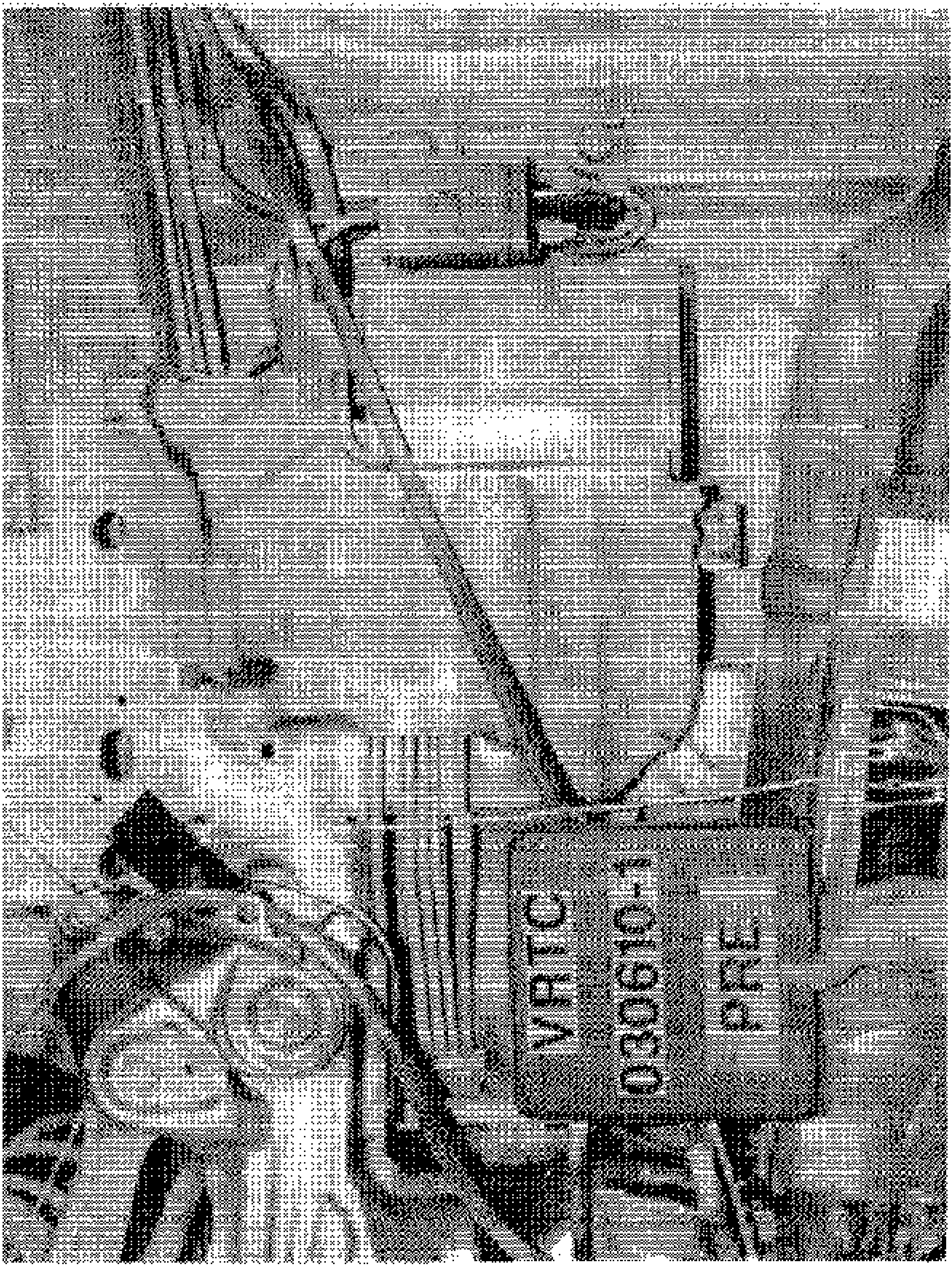


Image 31 Pre-Test Fuel Lines - View 2

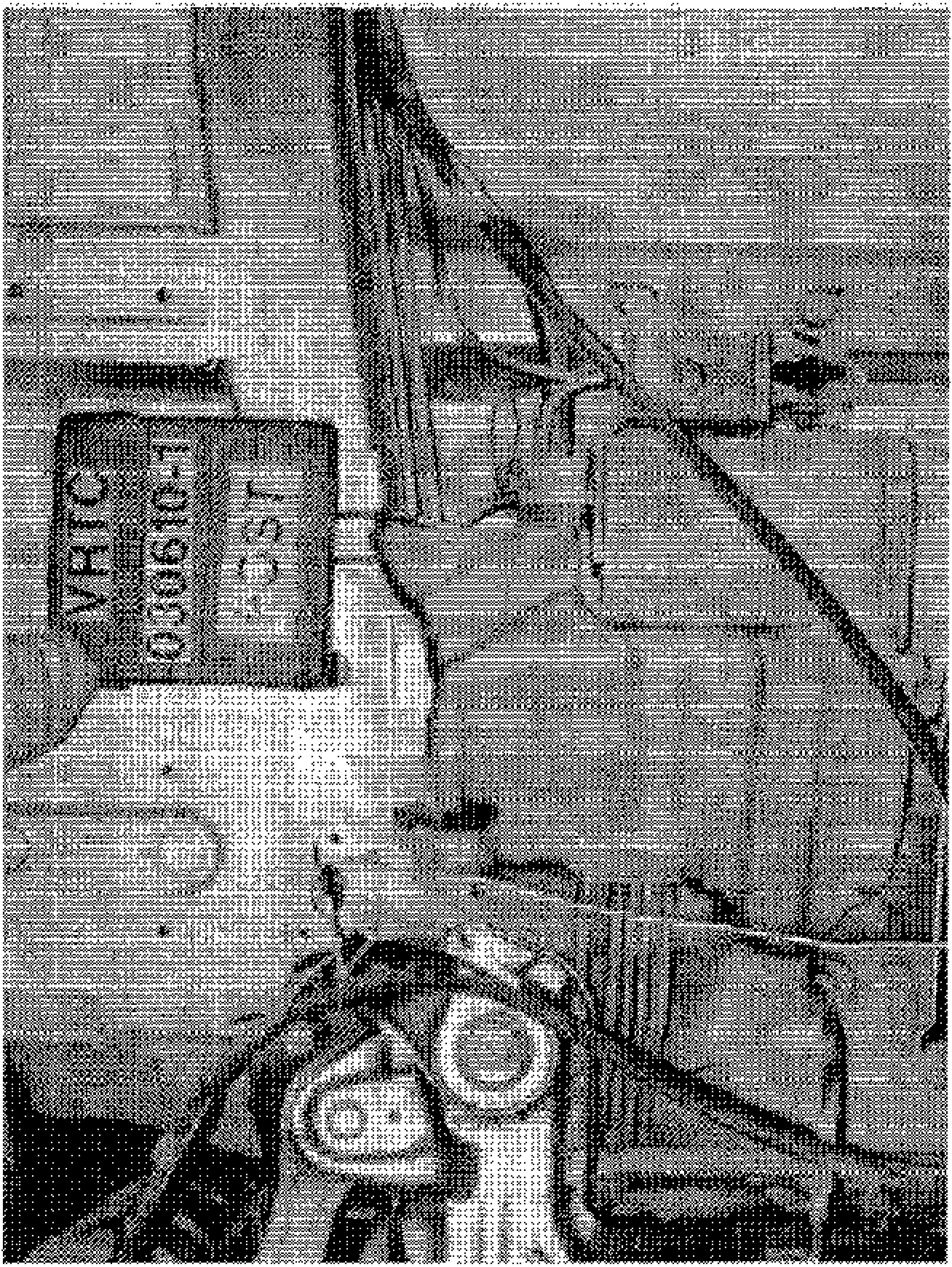


Image 32 Post-Test Fuel Lines - View 2

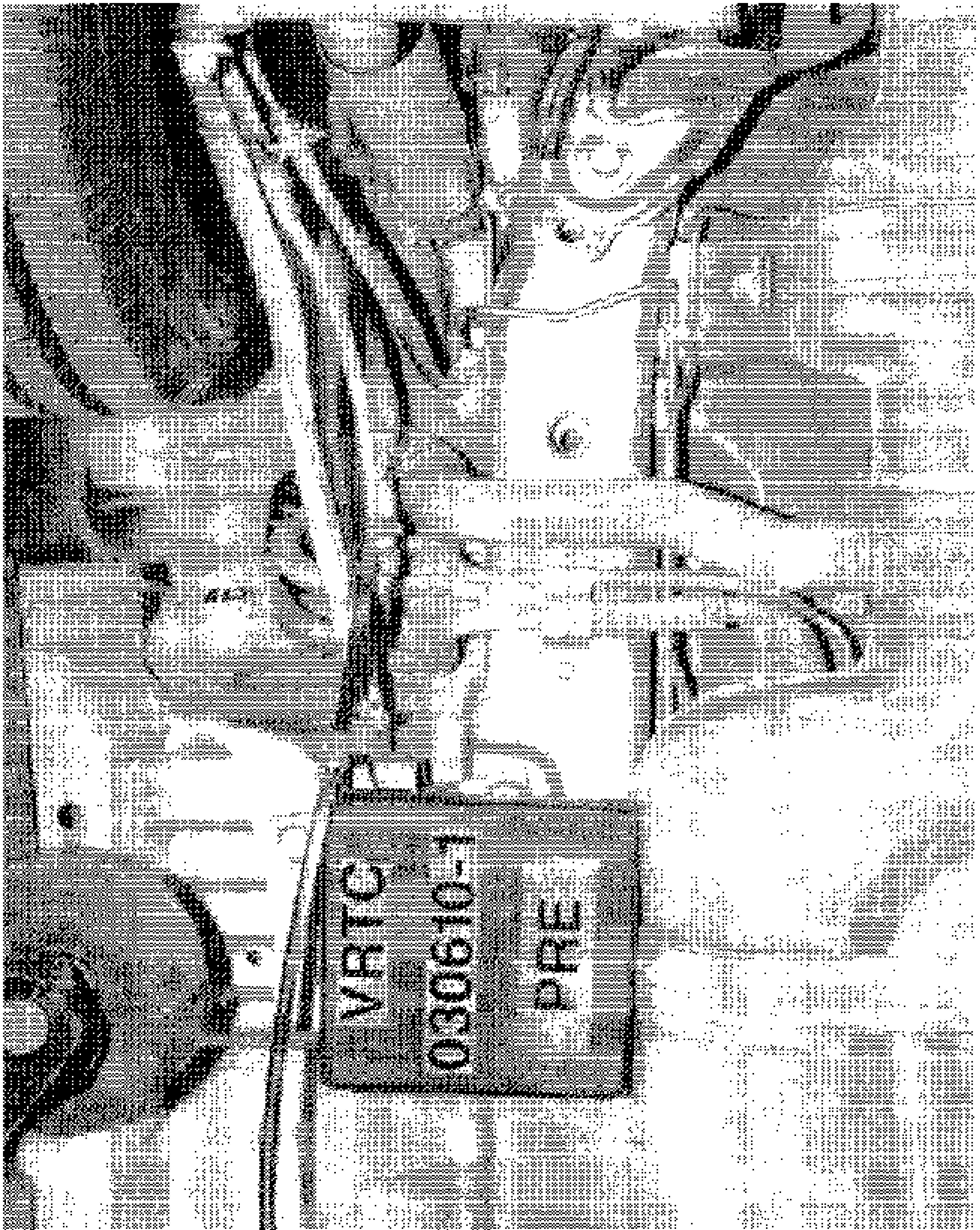


Image 33 Pre-Test Fuel Filler Neck View

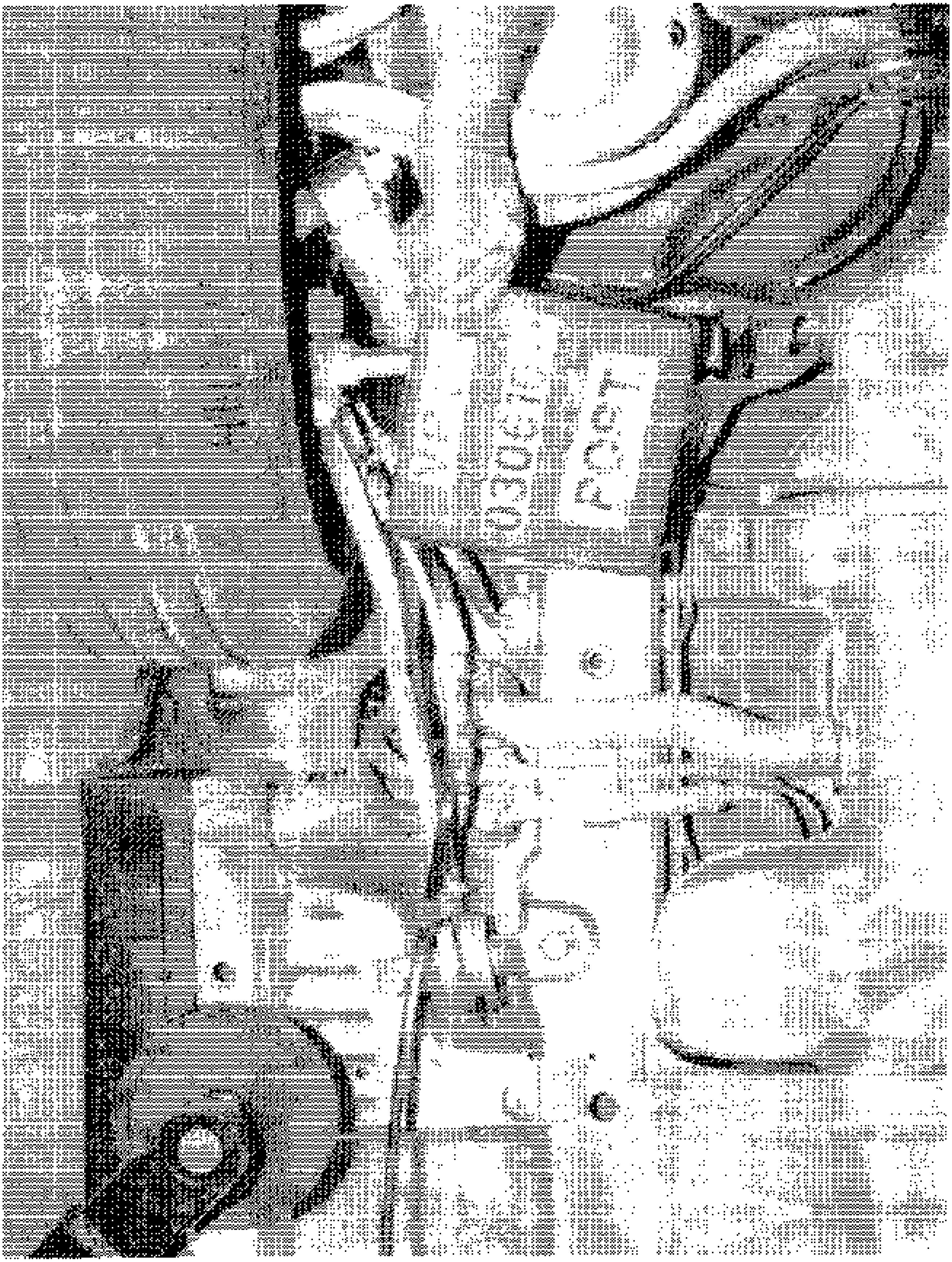


Image 34 Post-Test Fuel Filler Neck View

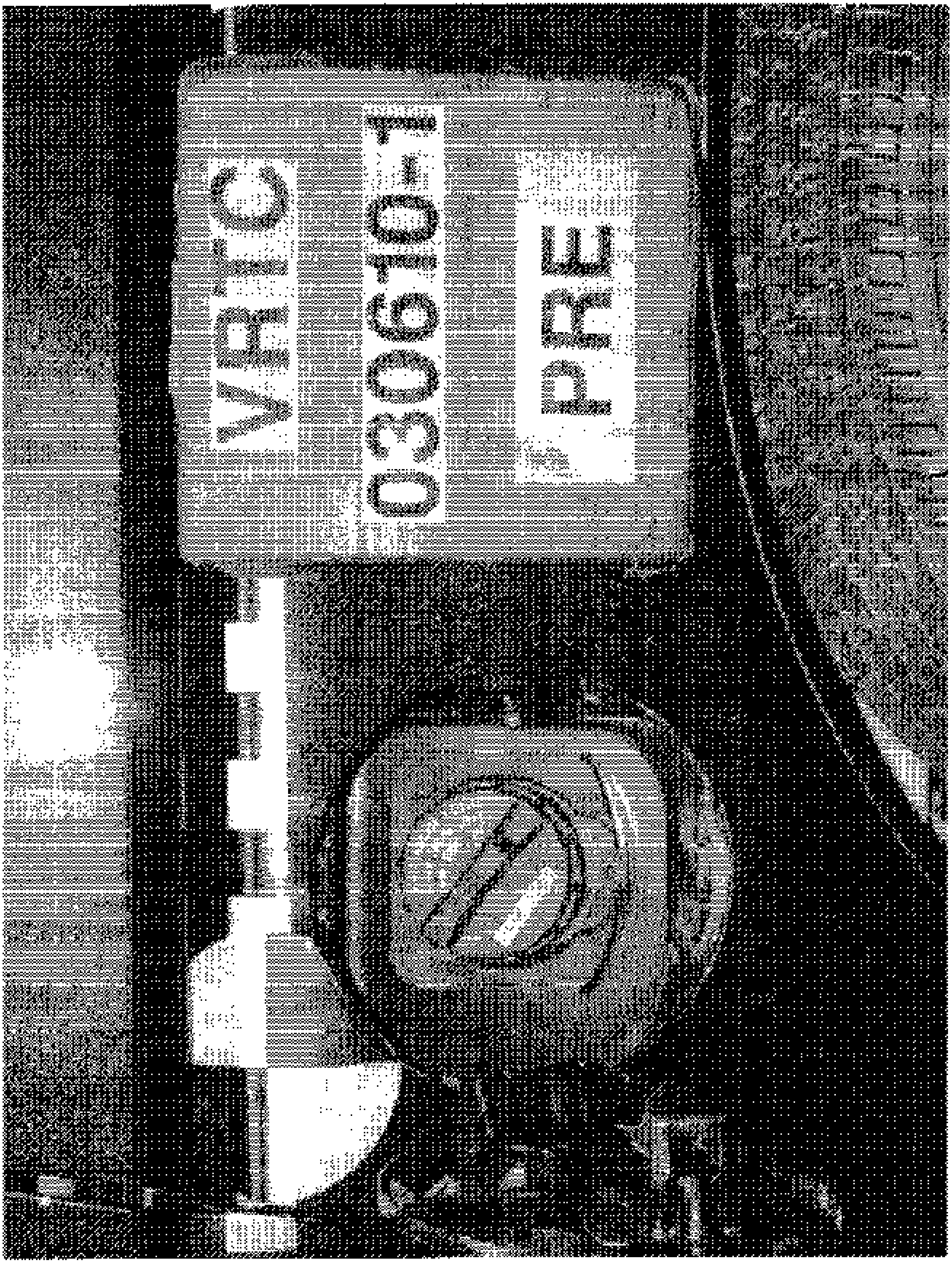


Image 35 Pre-Test Fuel Filler Cap View

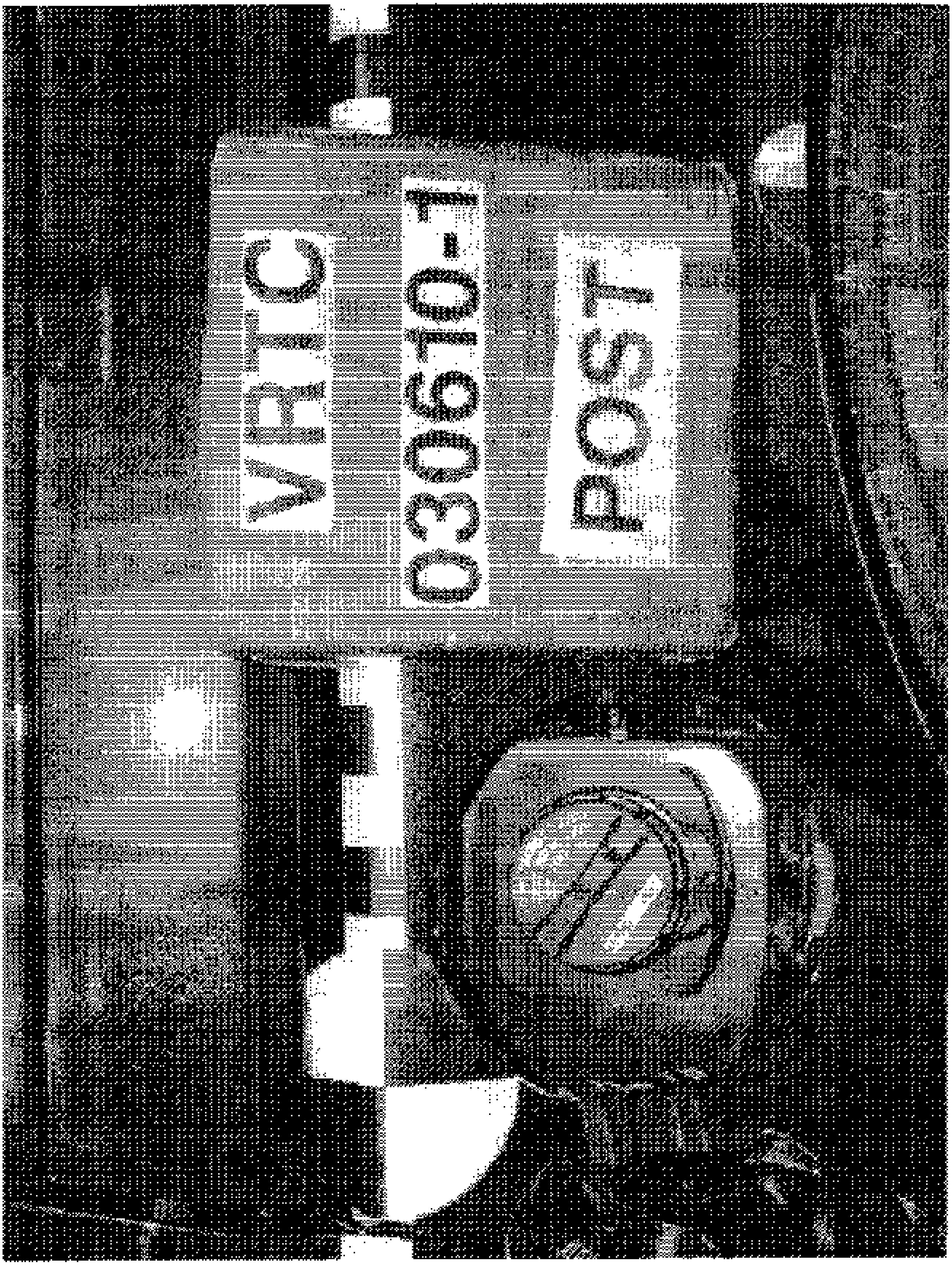


Image 36 Post-Test Fuel Filler Cap View

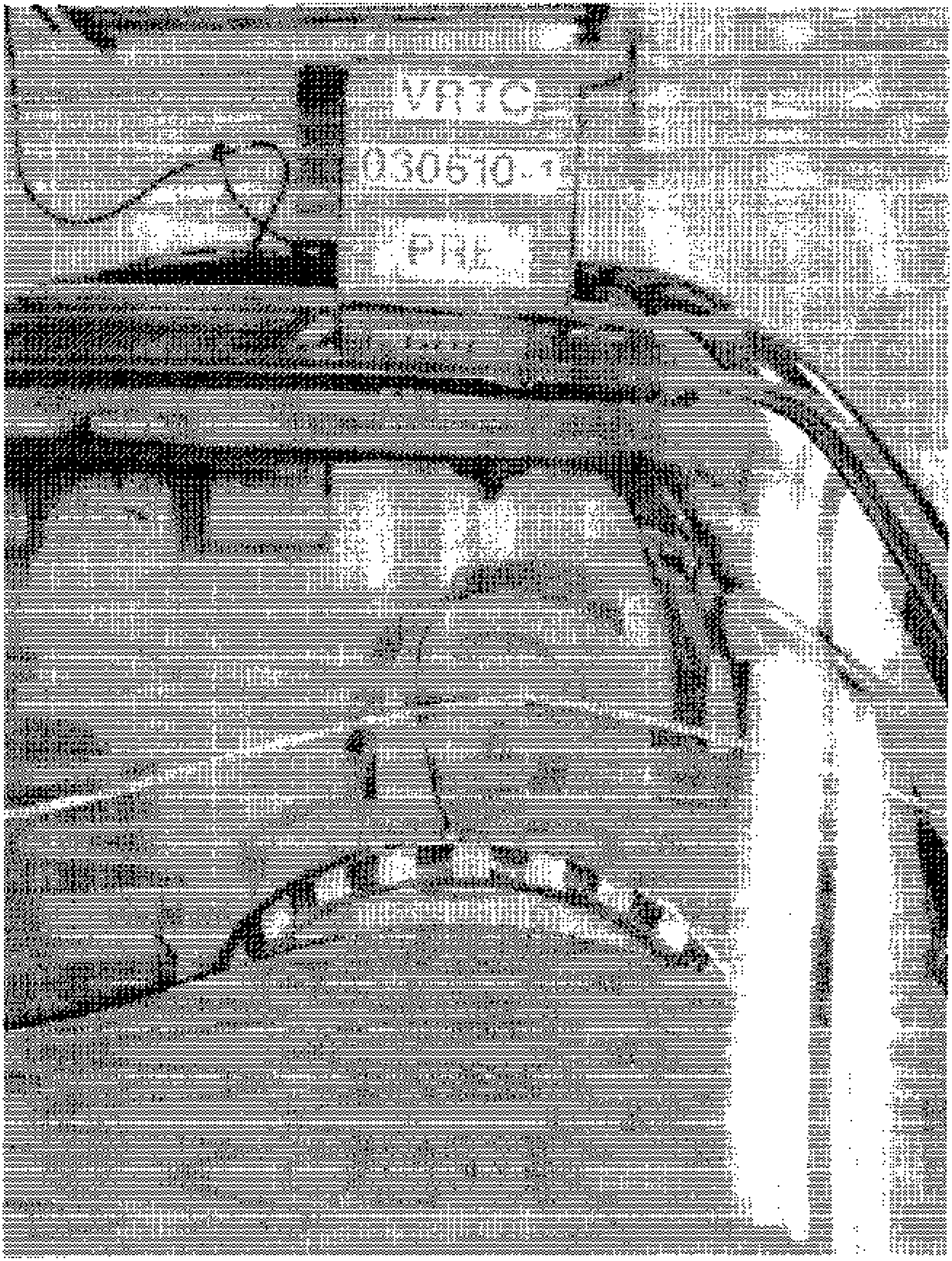


Image 37 Pre-Test Driver Dummy Front View

Image 38 Post-Test Driver Dummy Front View

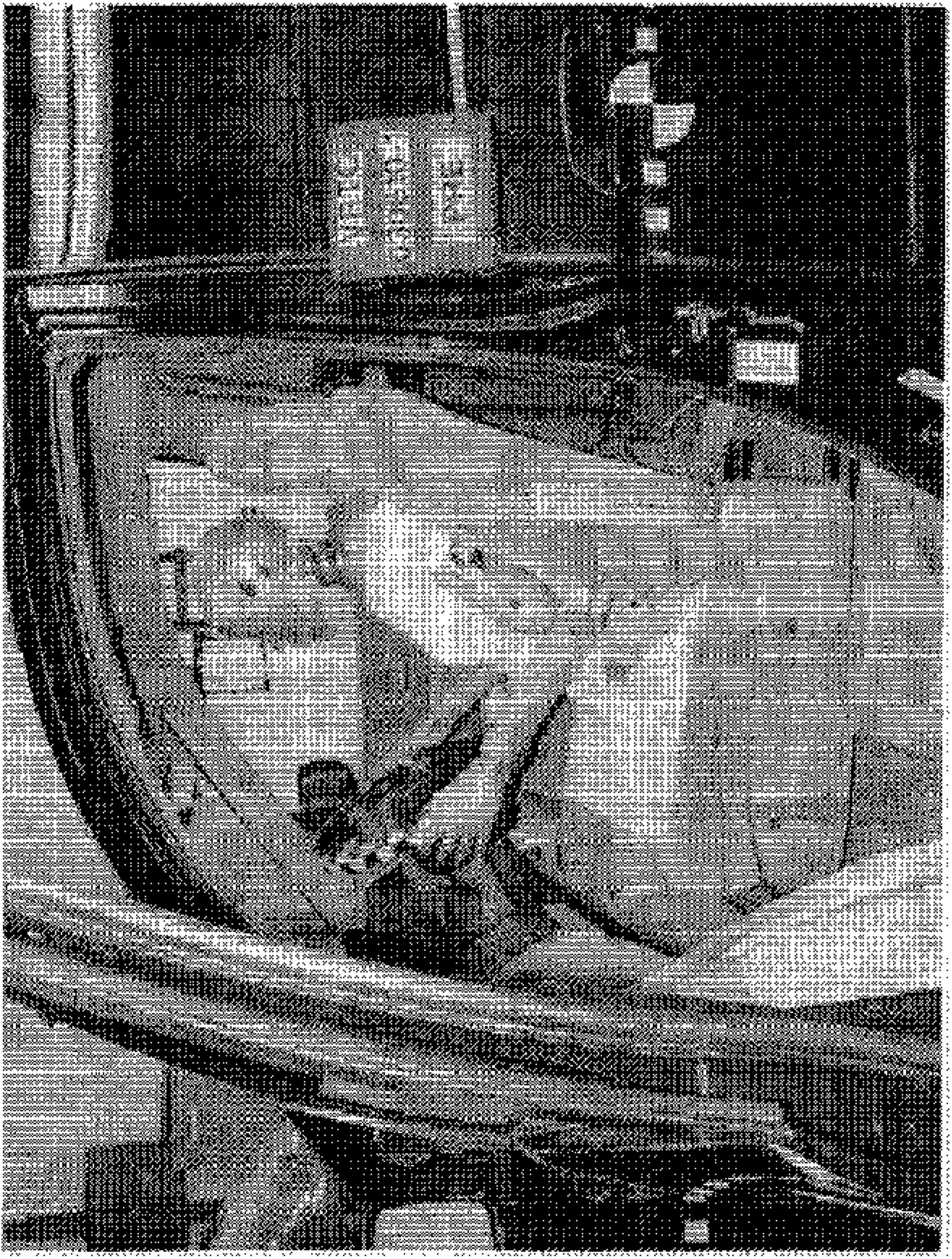


Image 39 Pre-Test Driver Dummy Position View

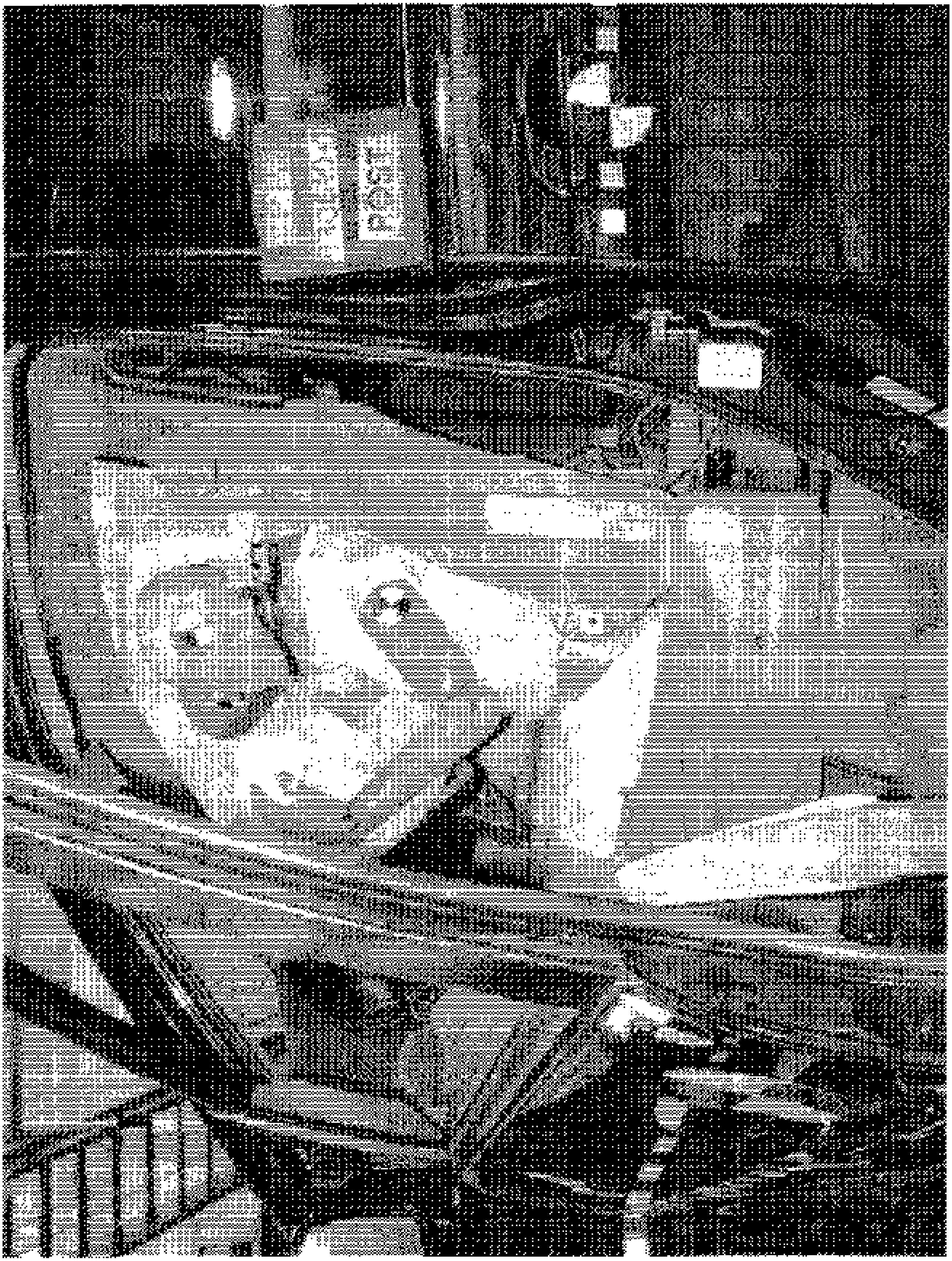


Image 40 Post-Test Driver Dummy Position View

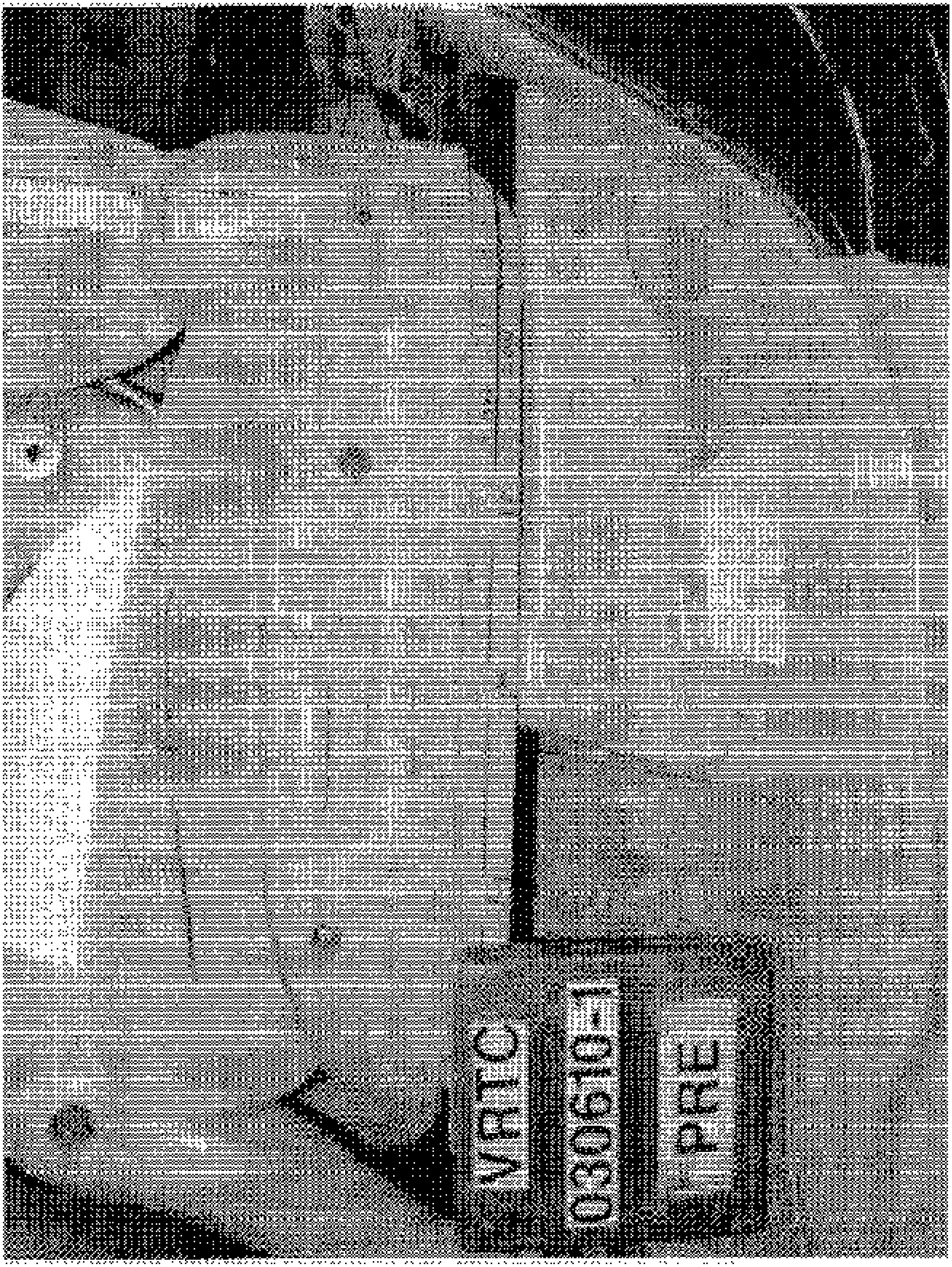


Image 41: Pre-Test Driver Seat Position View

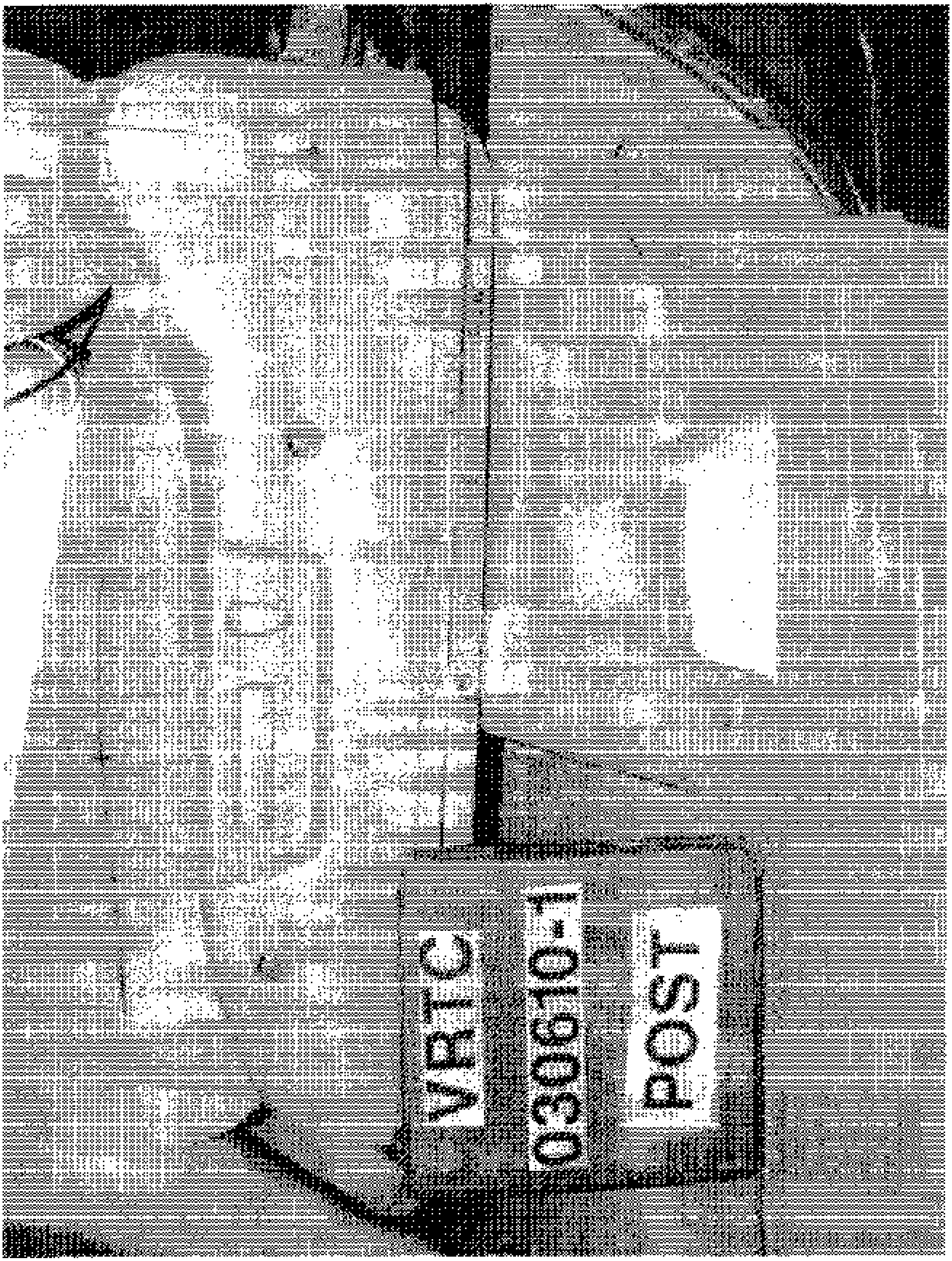


Image 42 Post-Test Driver Seat Position View

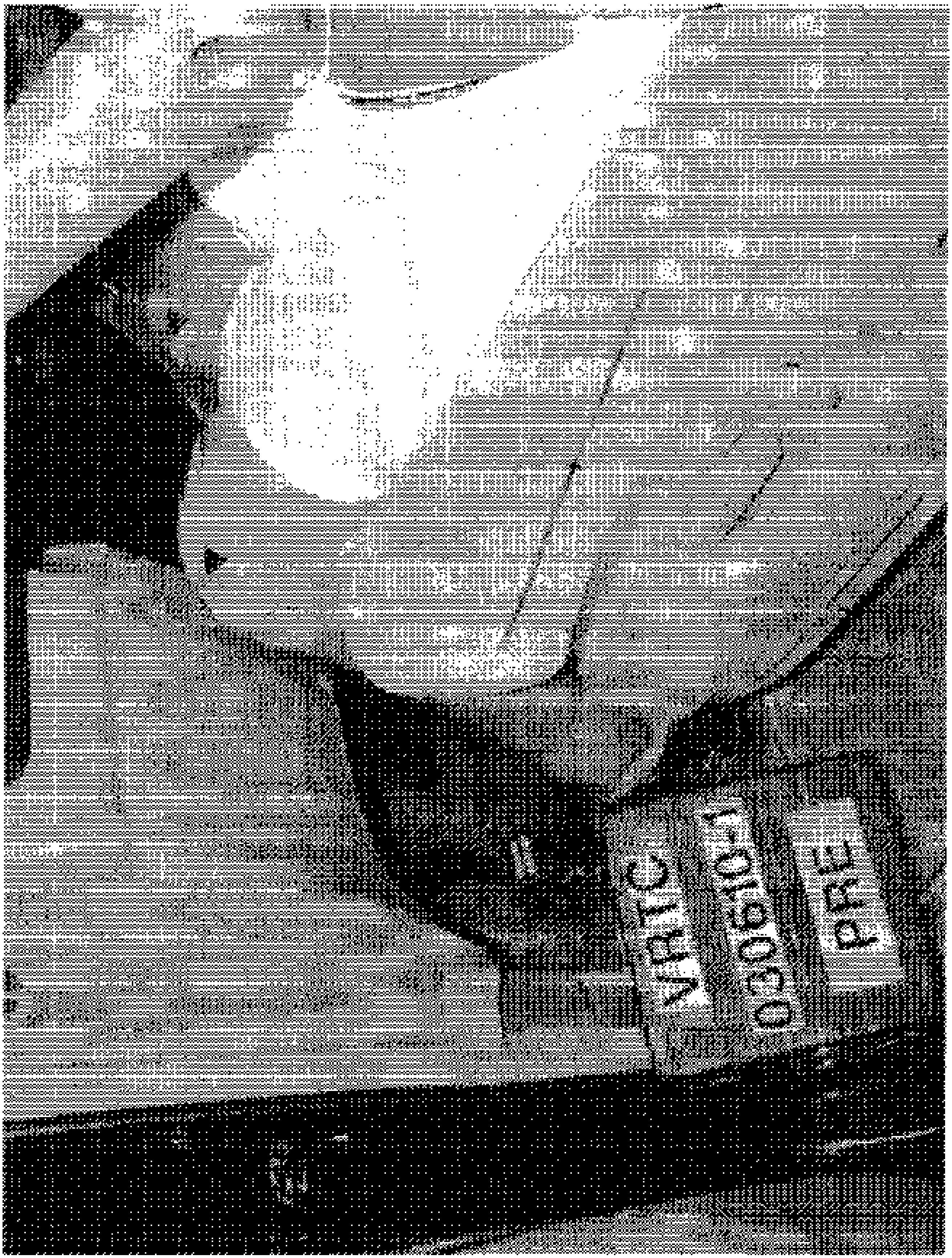


Image 43 Pre-Test Driver Dummy Knee Bolster View

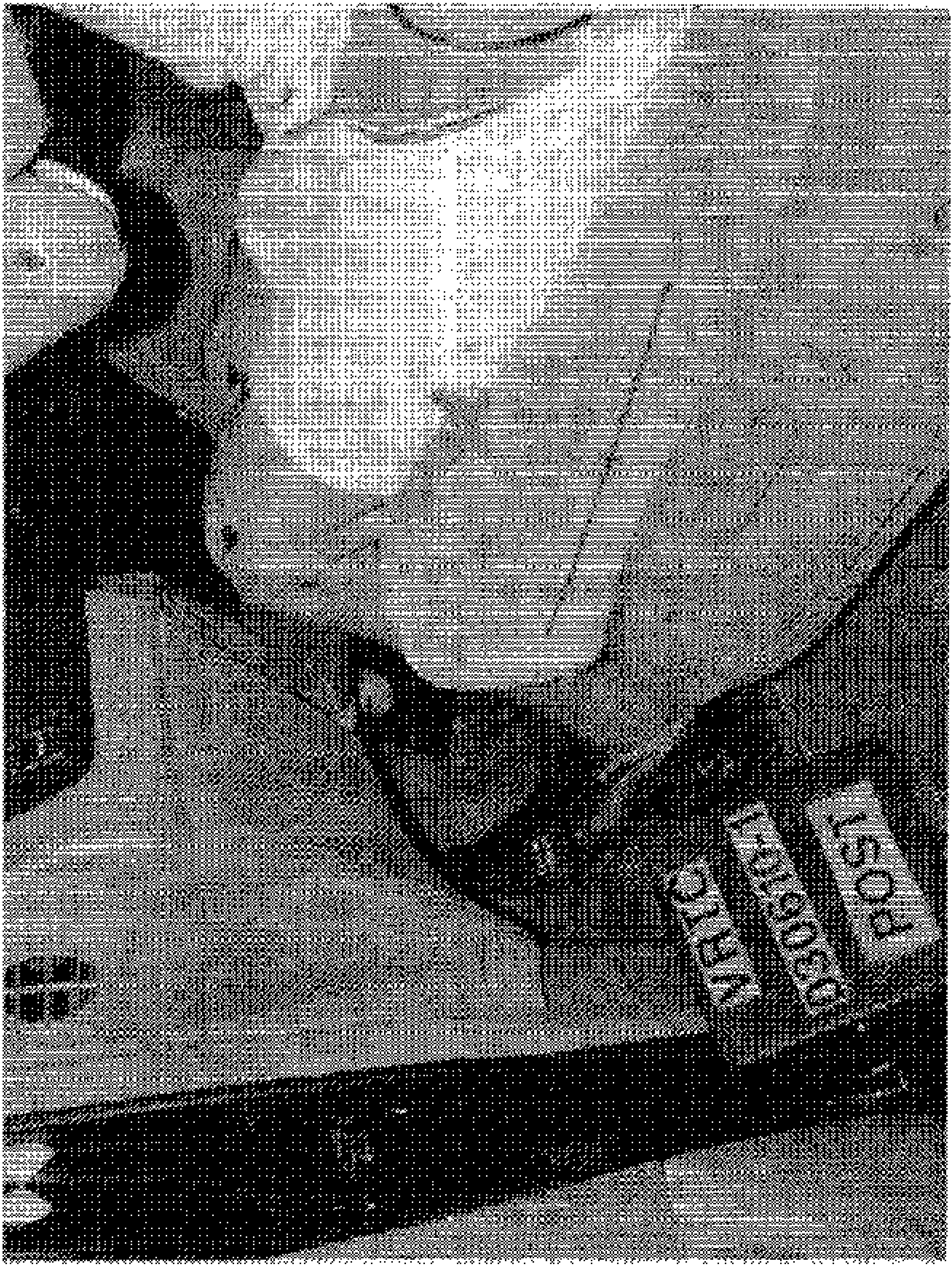


Image 44 Post-Test Driver Dummy Knee Bolster View

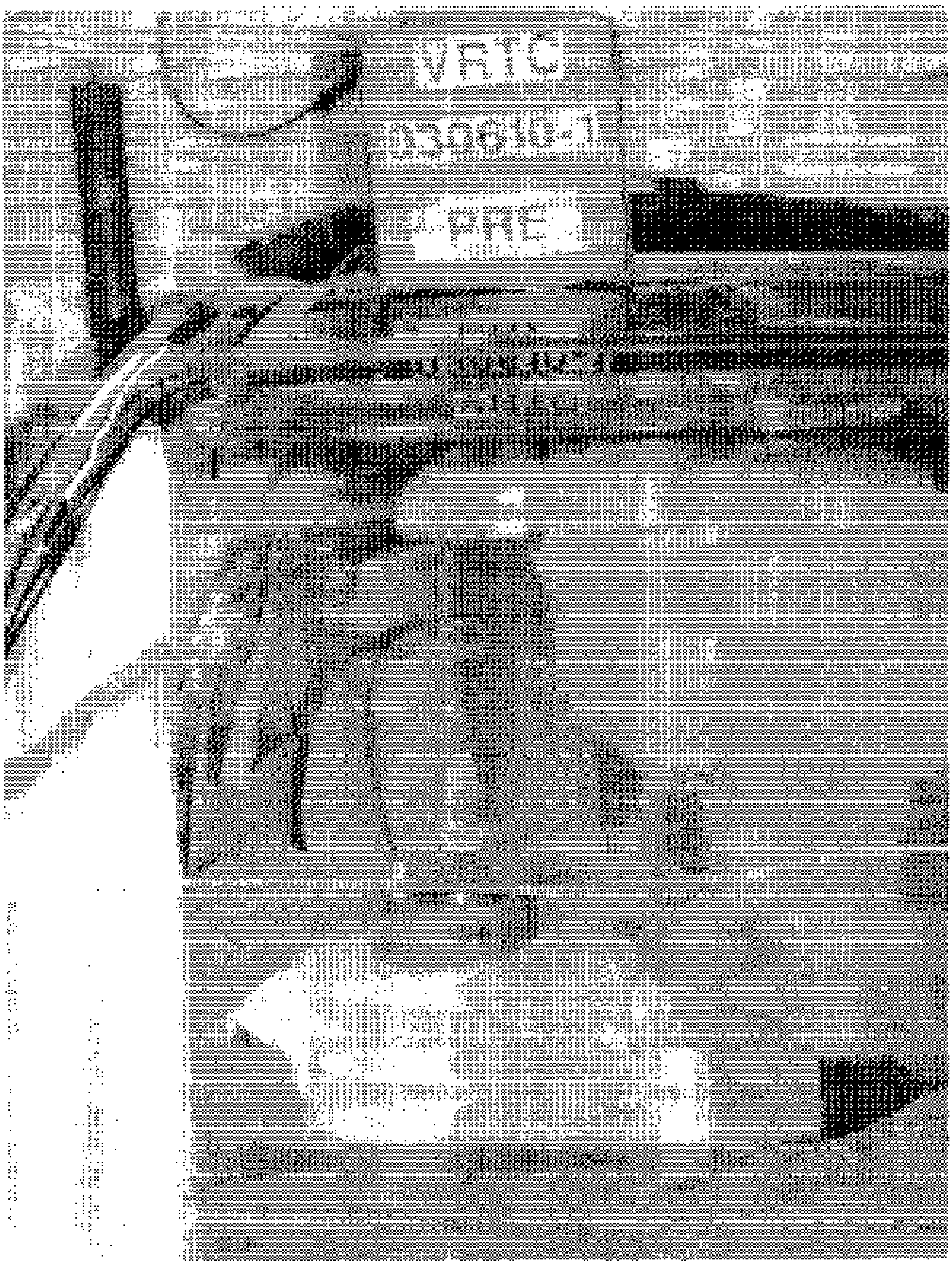


Image 45 Pre-Test Passenger Dummy Front View

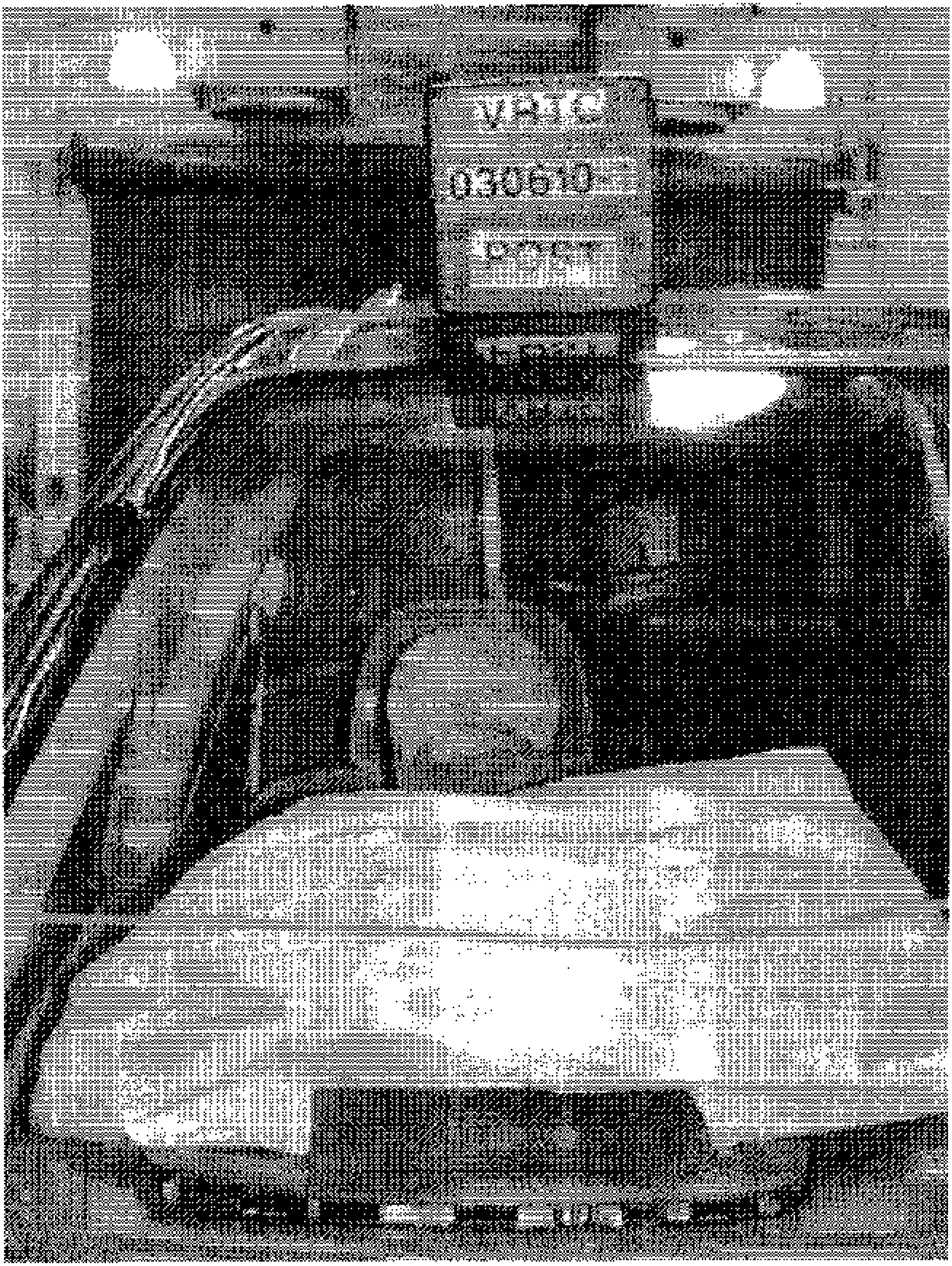


Image 46 Post-Test Passenger Dummy Front View

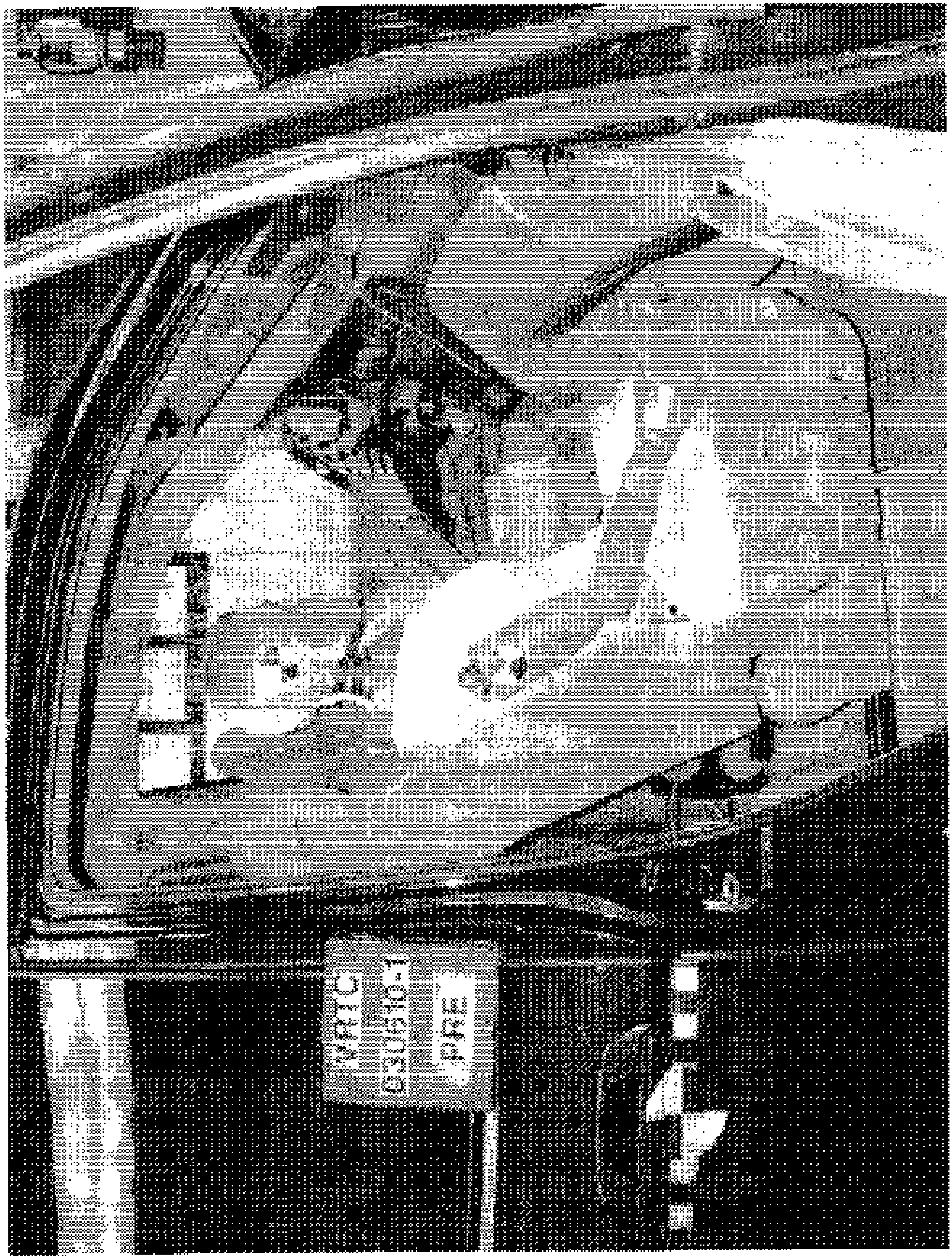


Image 47 Pre-Test Passenger Dummy Position View

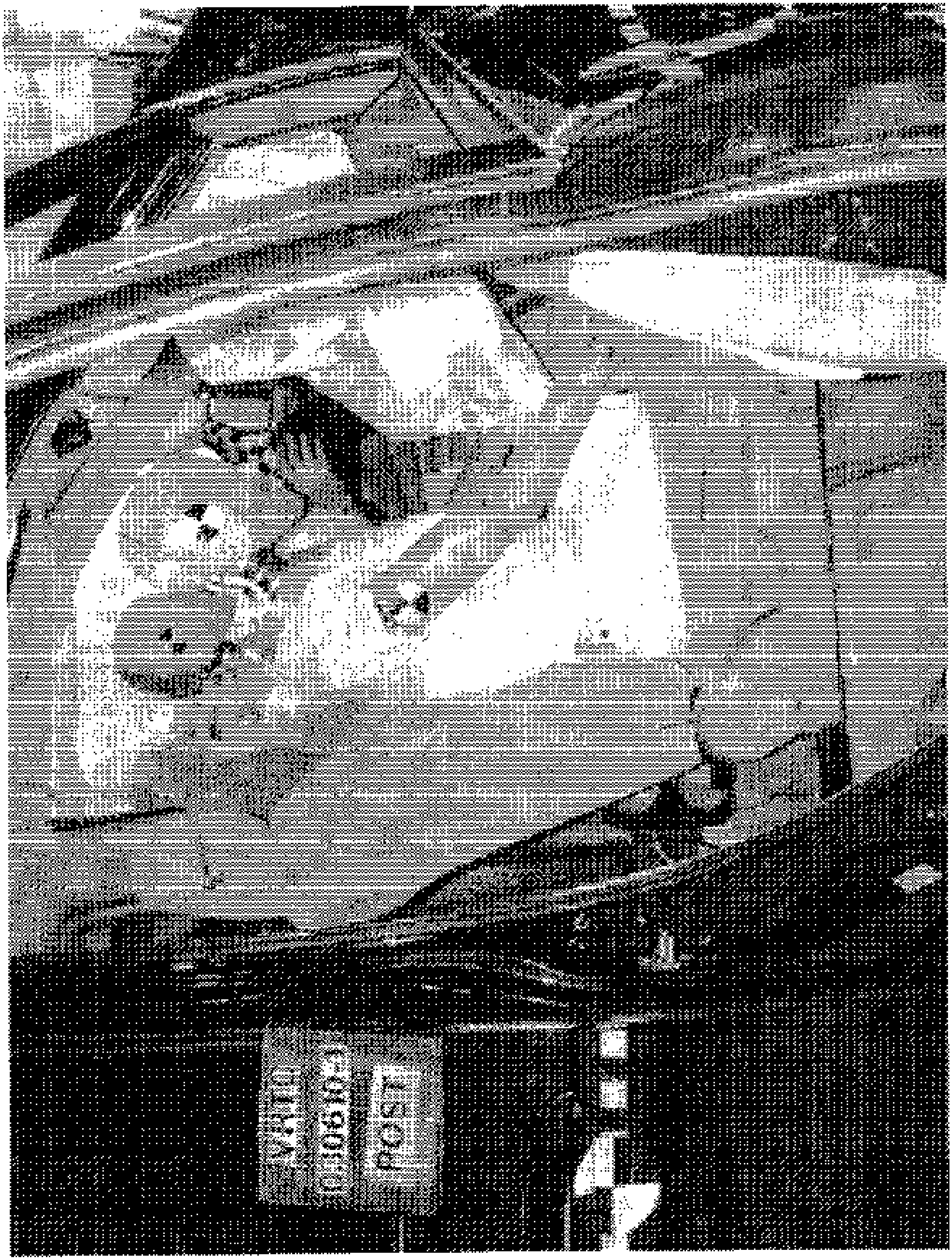


Image 48 Post-Test Passenger Dummy Position View

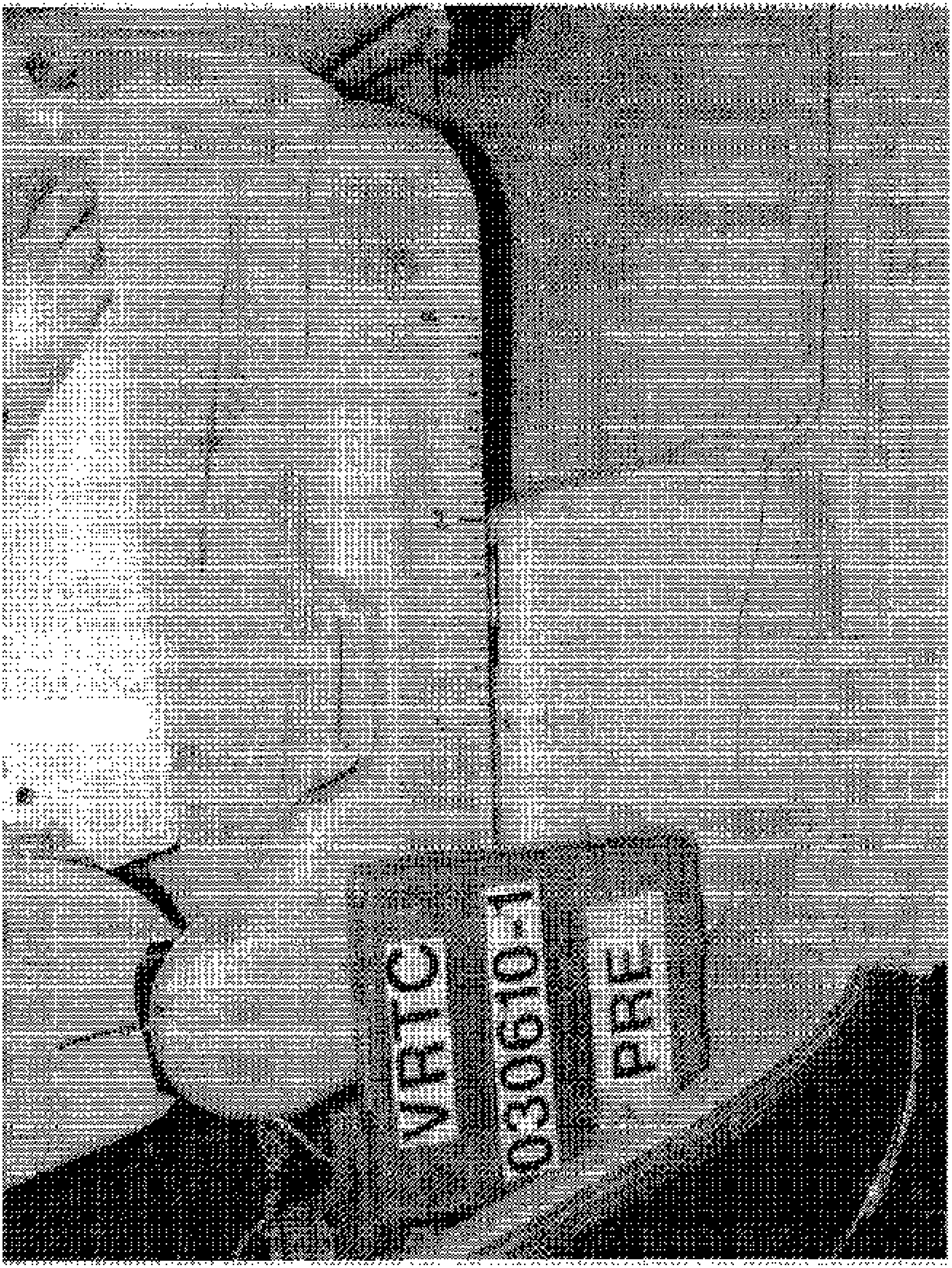


Image 49 Pre-Test Passenger Seat Position View

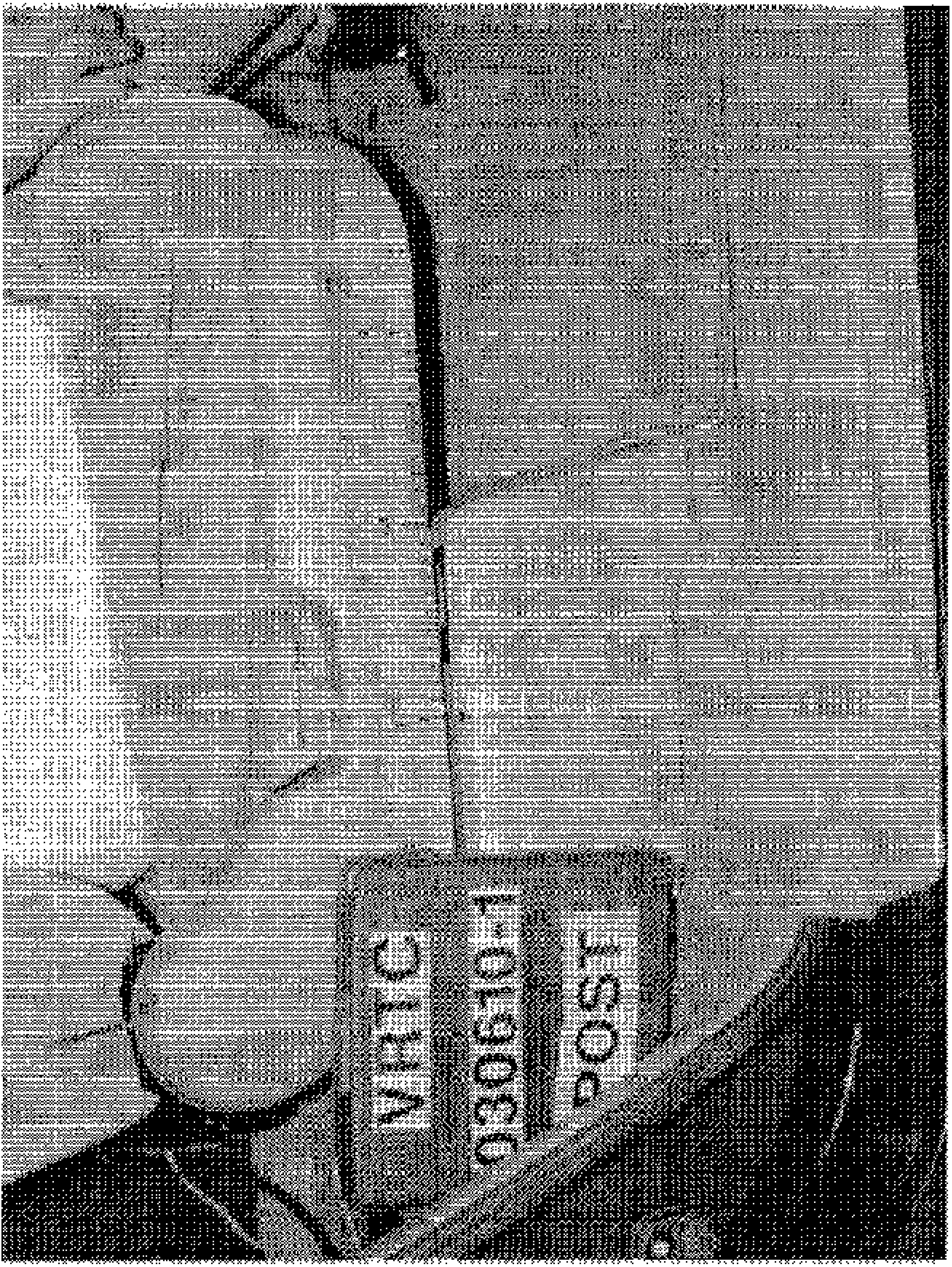


Image 50 Post-Test Passenger Seat Position View

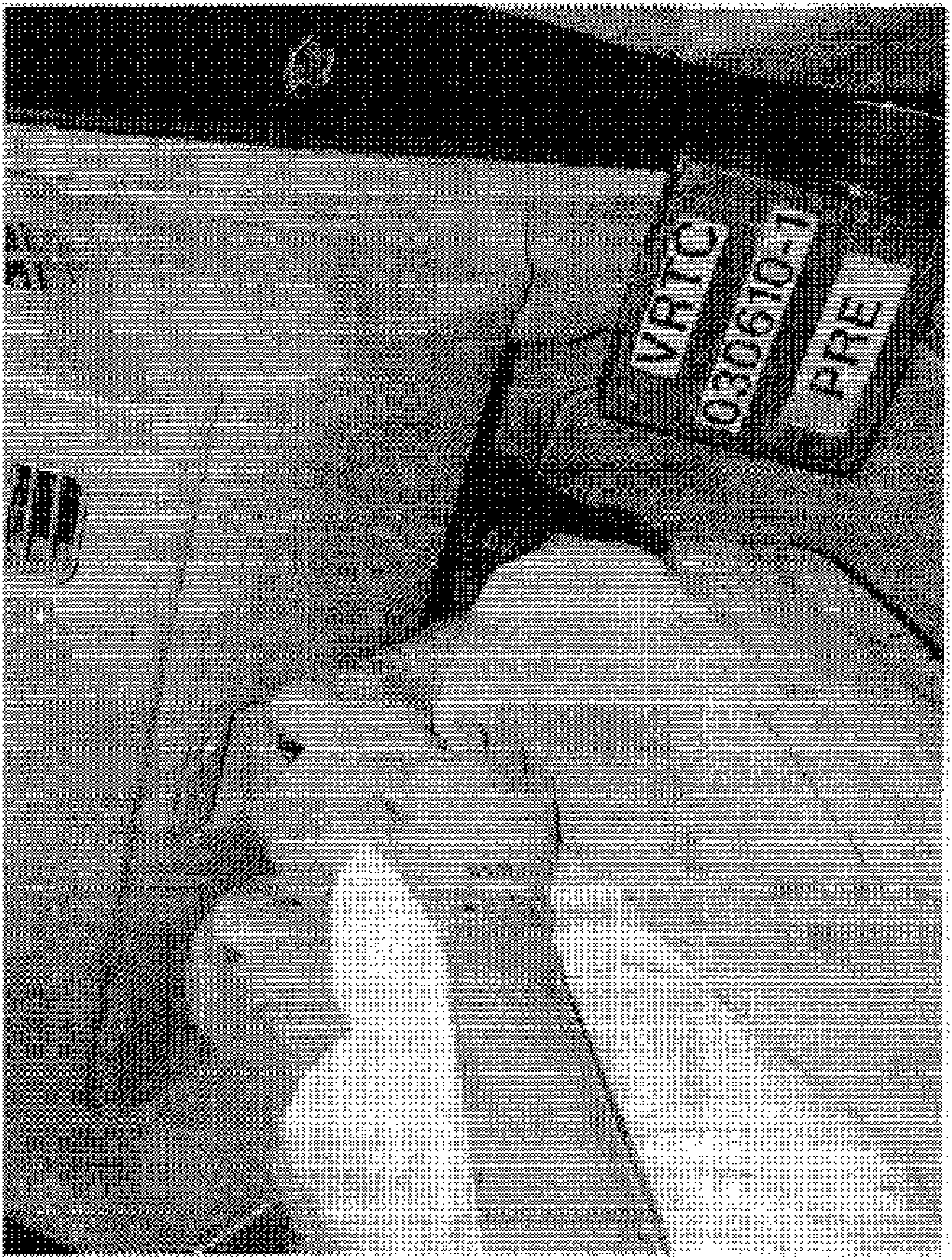


Image 51 Pre-Test Passenger Dummy Knee Bolster View

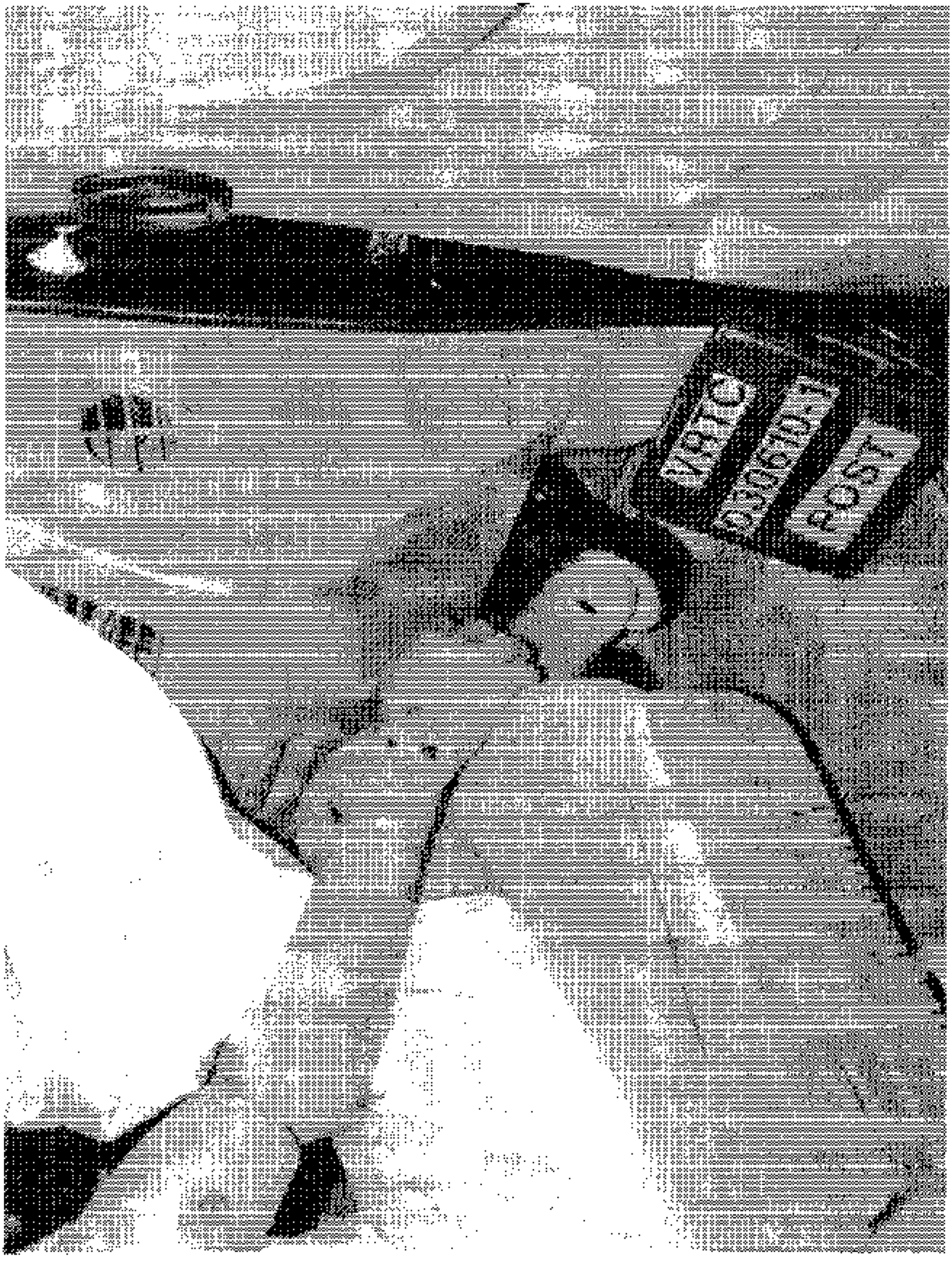


Image 52 Post-Test Passenger Dummy Knee Bolster View

Image 53 Post-Test Driver Dummy Head Contact - View 1

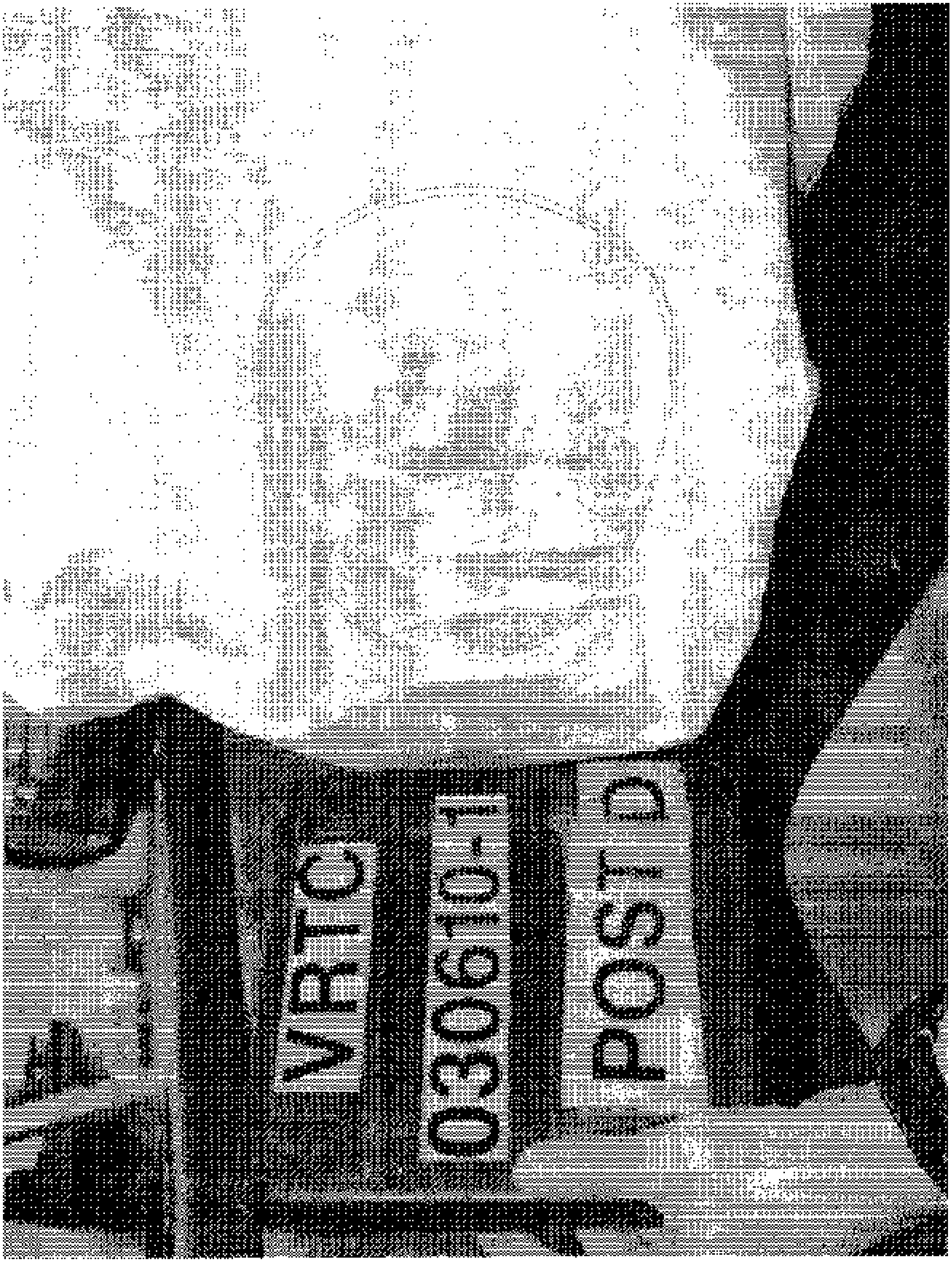


Image 54 Post-Test Driver Dummy Head Contact - View 2

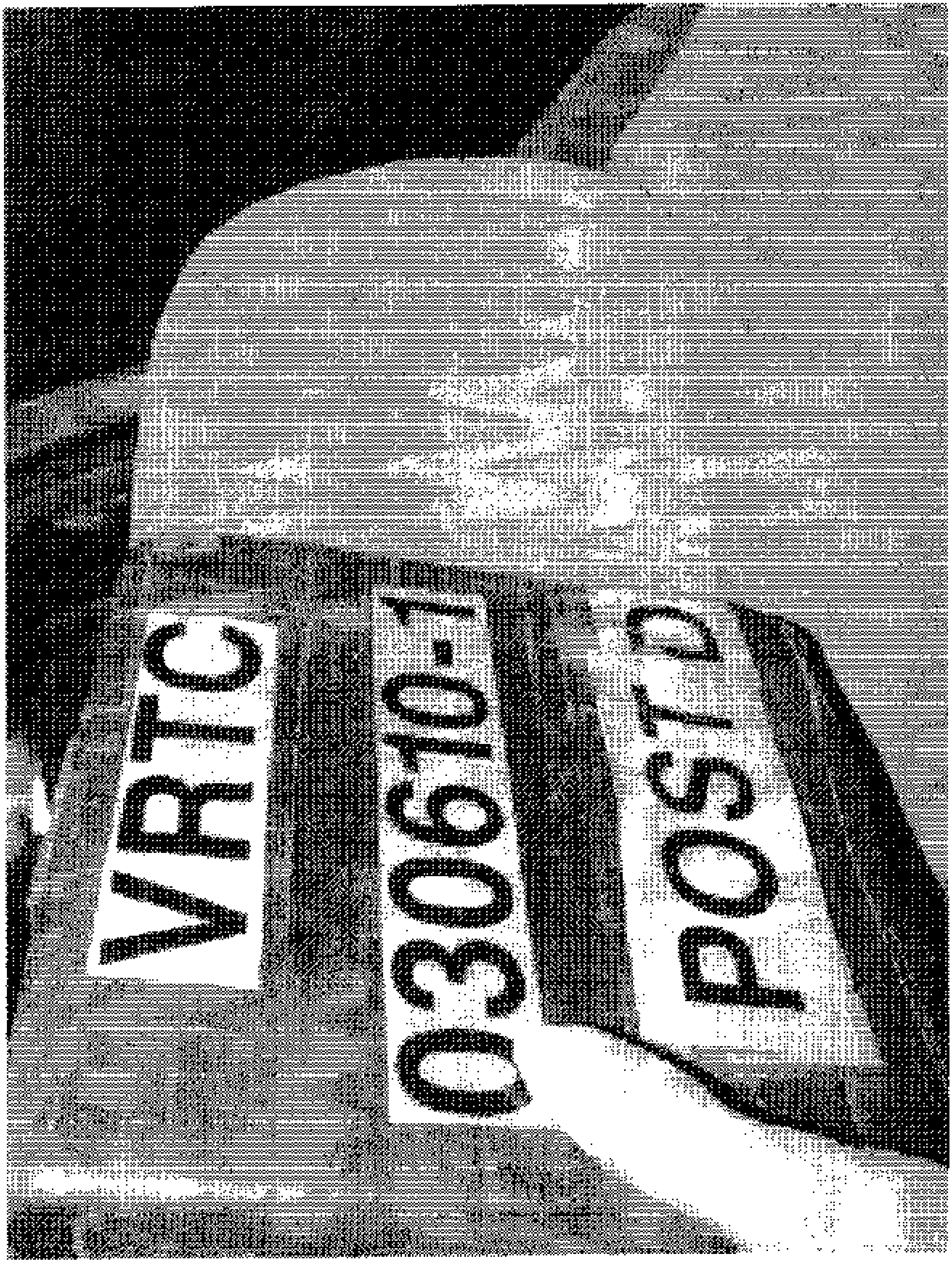


Image 55 Post-Test Driver Dummy Head Contact - View 3

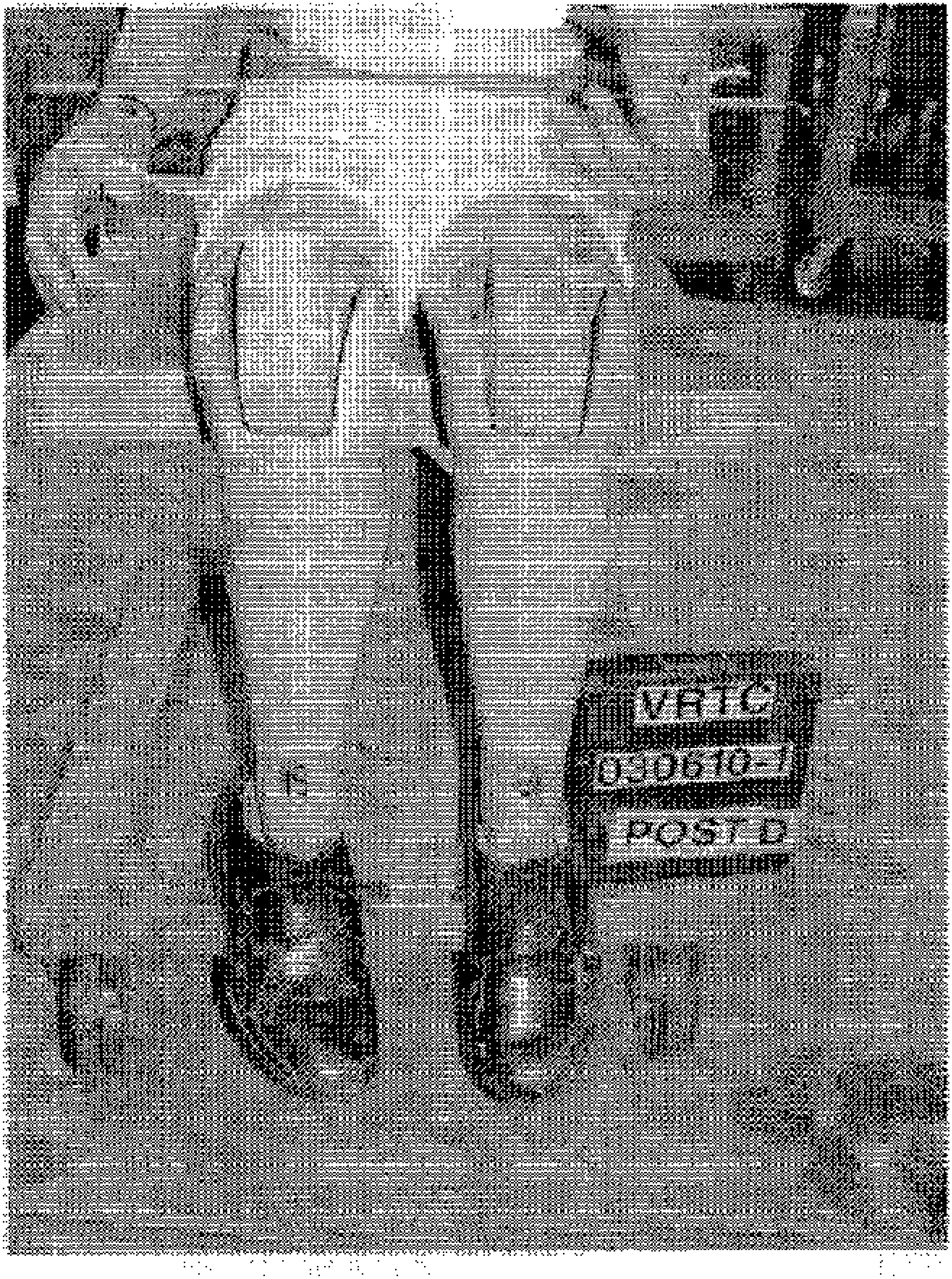


Image 56. Post-Test Driver Dummy Knee Contact - View 1

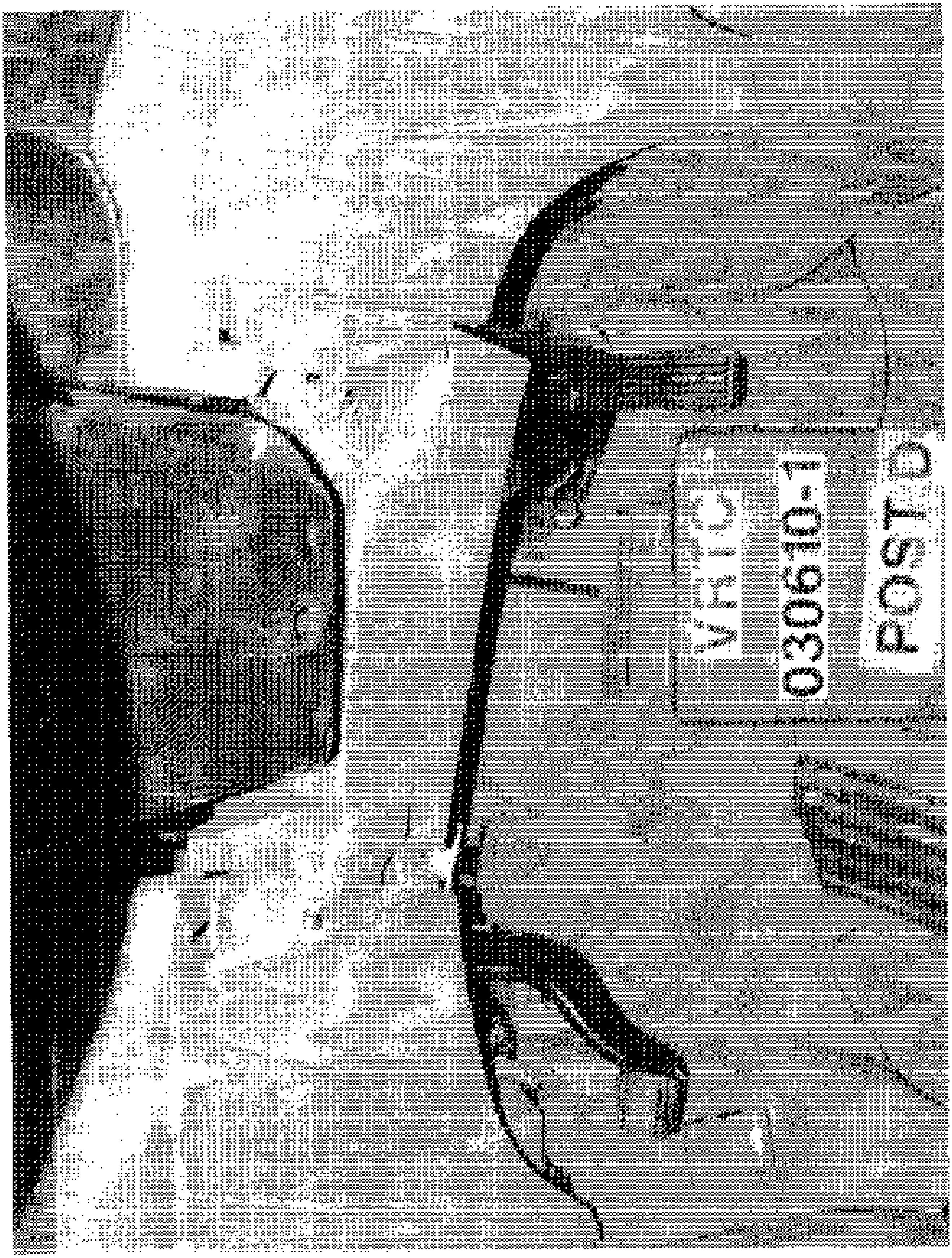


Image 57 Post-Test Driver Dummy Knee Contact - View 2

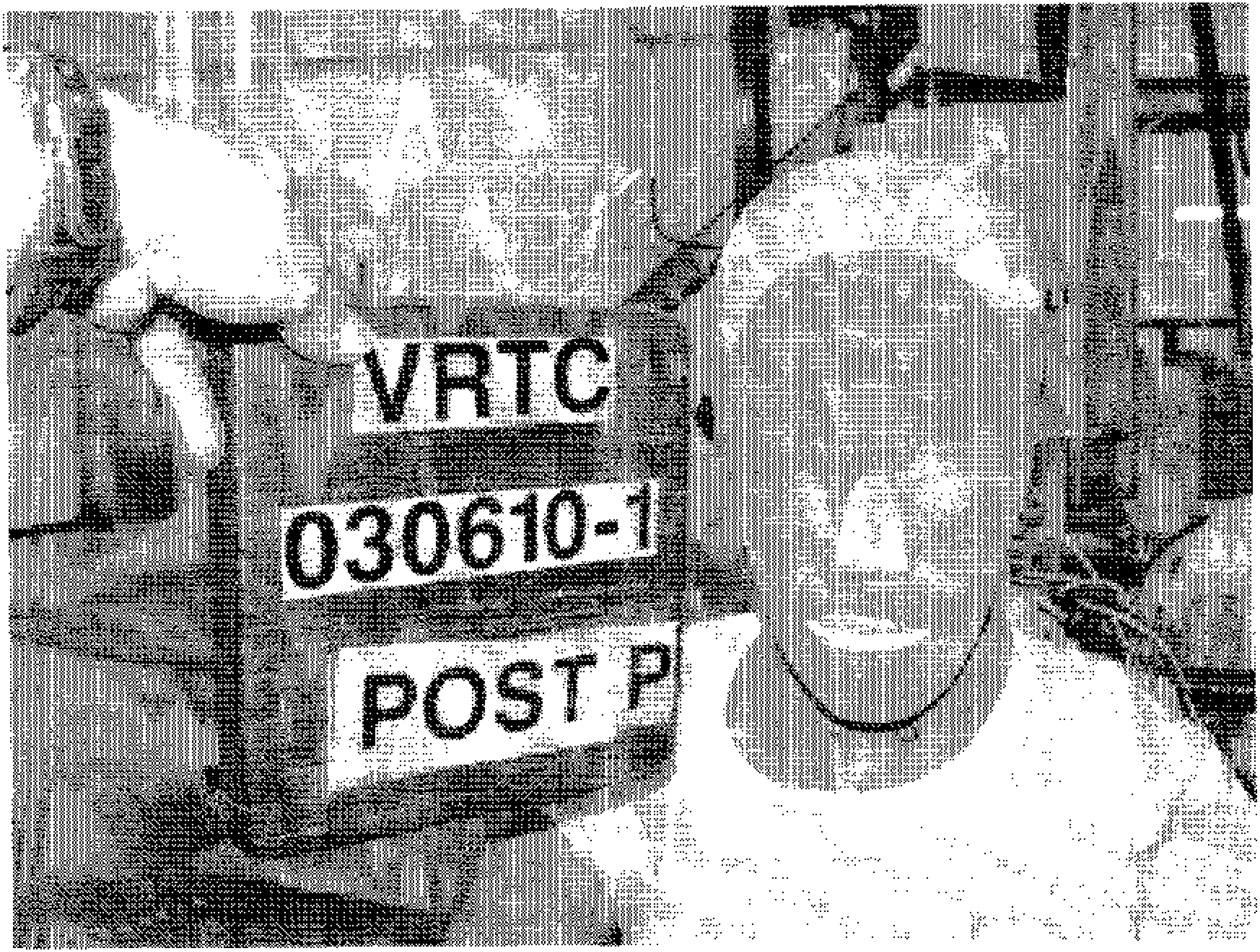


Image 58. Post-Test Passenger Dummy Head Contact - View 1

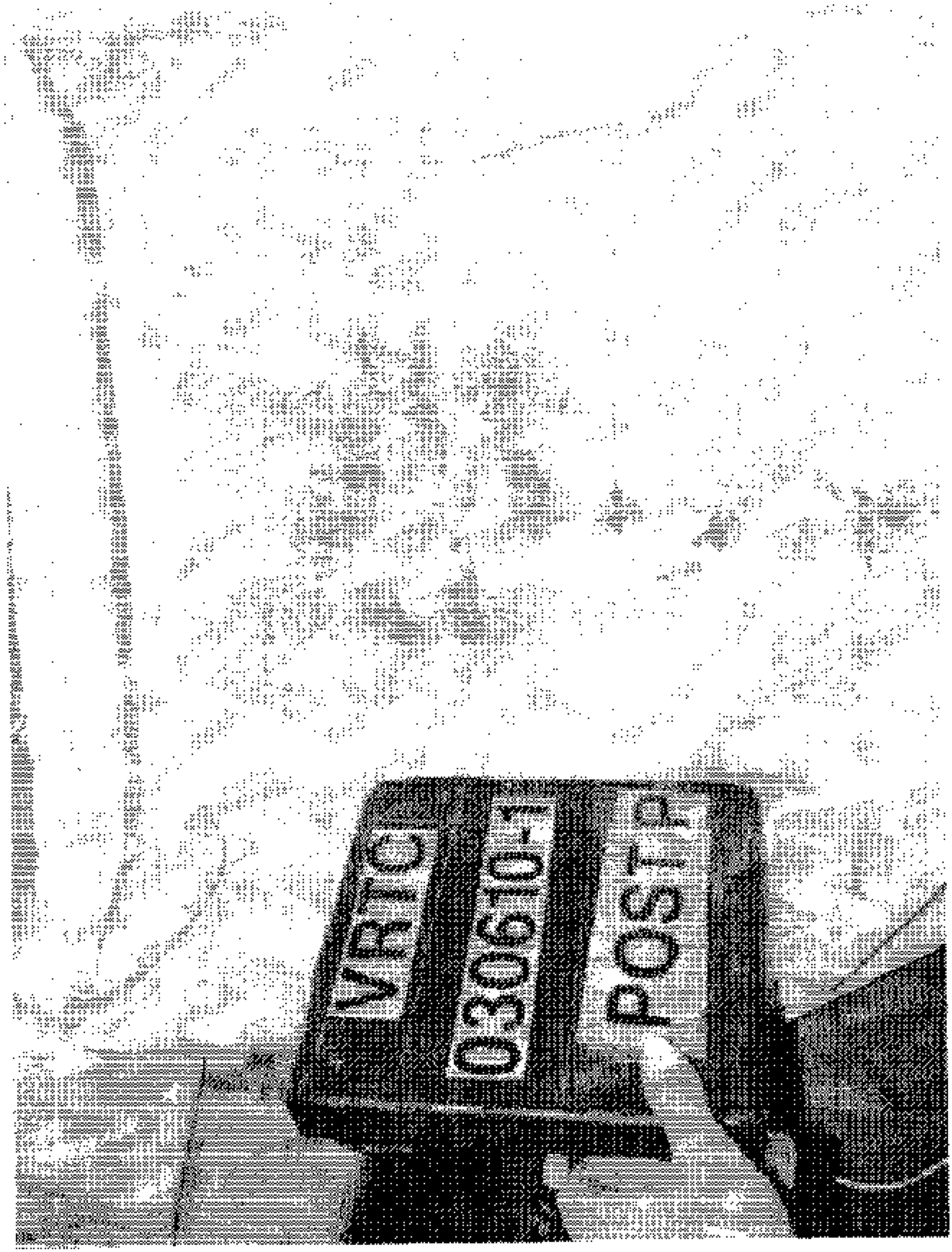


Image 59 Post-Test Passenger Dummy Head Contact - View 2

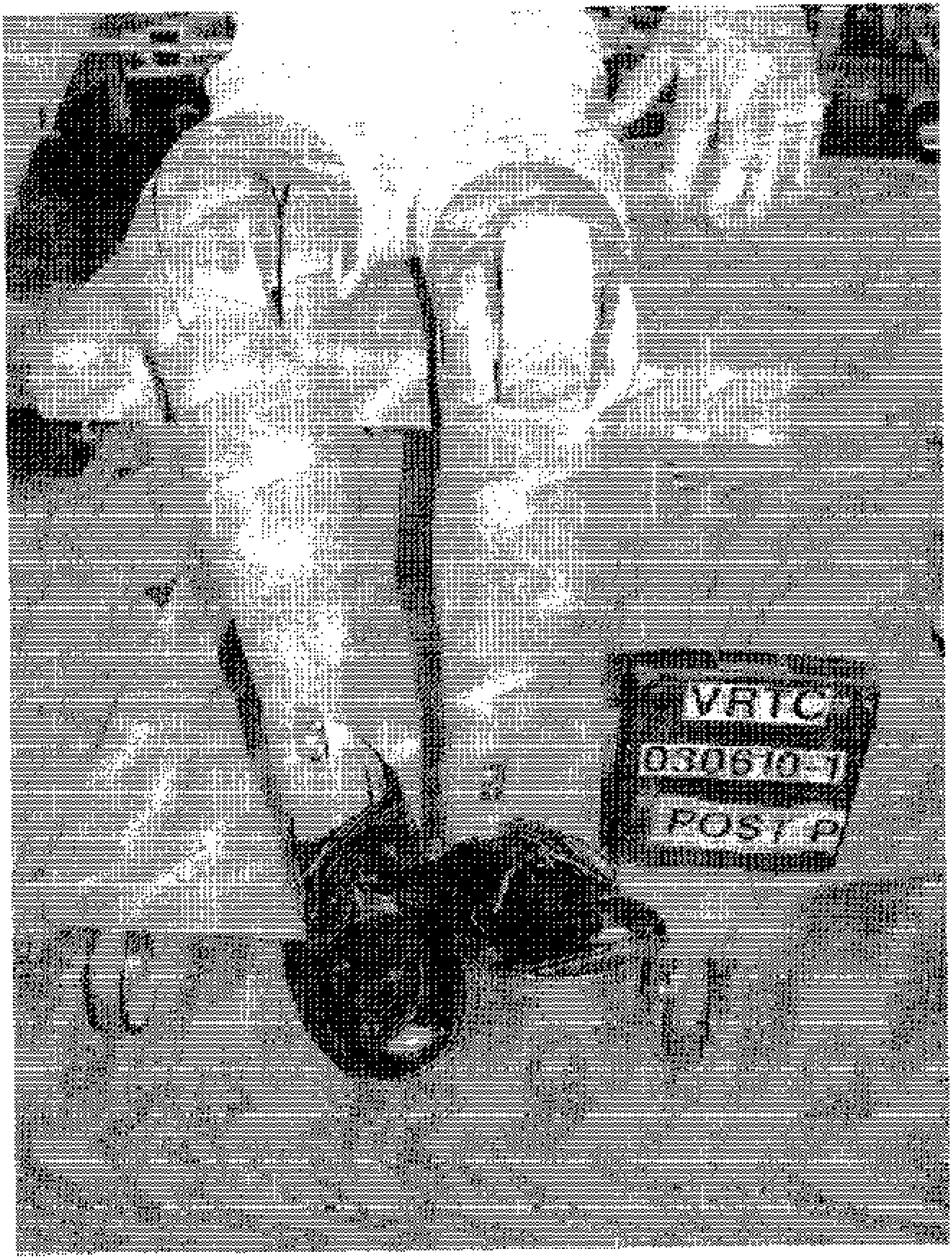


Image 60 Post-Test Passenger Dummy Knee Contact - View 1

Image 61 Post-Test Passenger Dummy Knee Contact - View 2

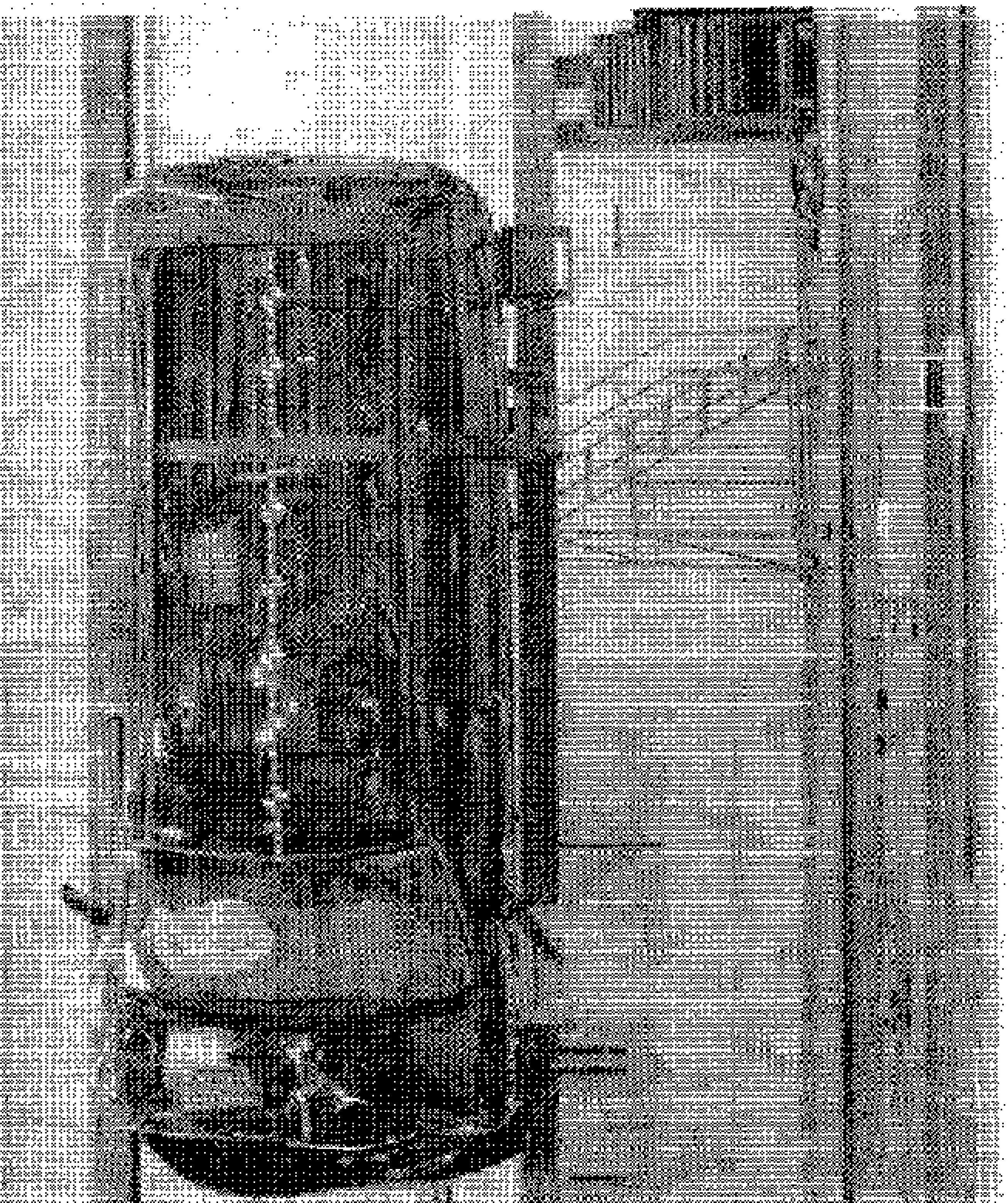


Image 62 Post-Test Vehicle on Static Rollover Device - 90° View

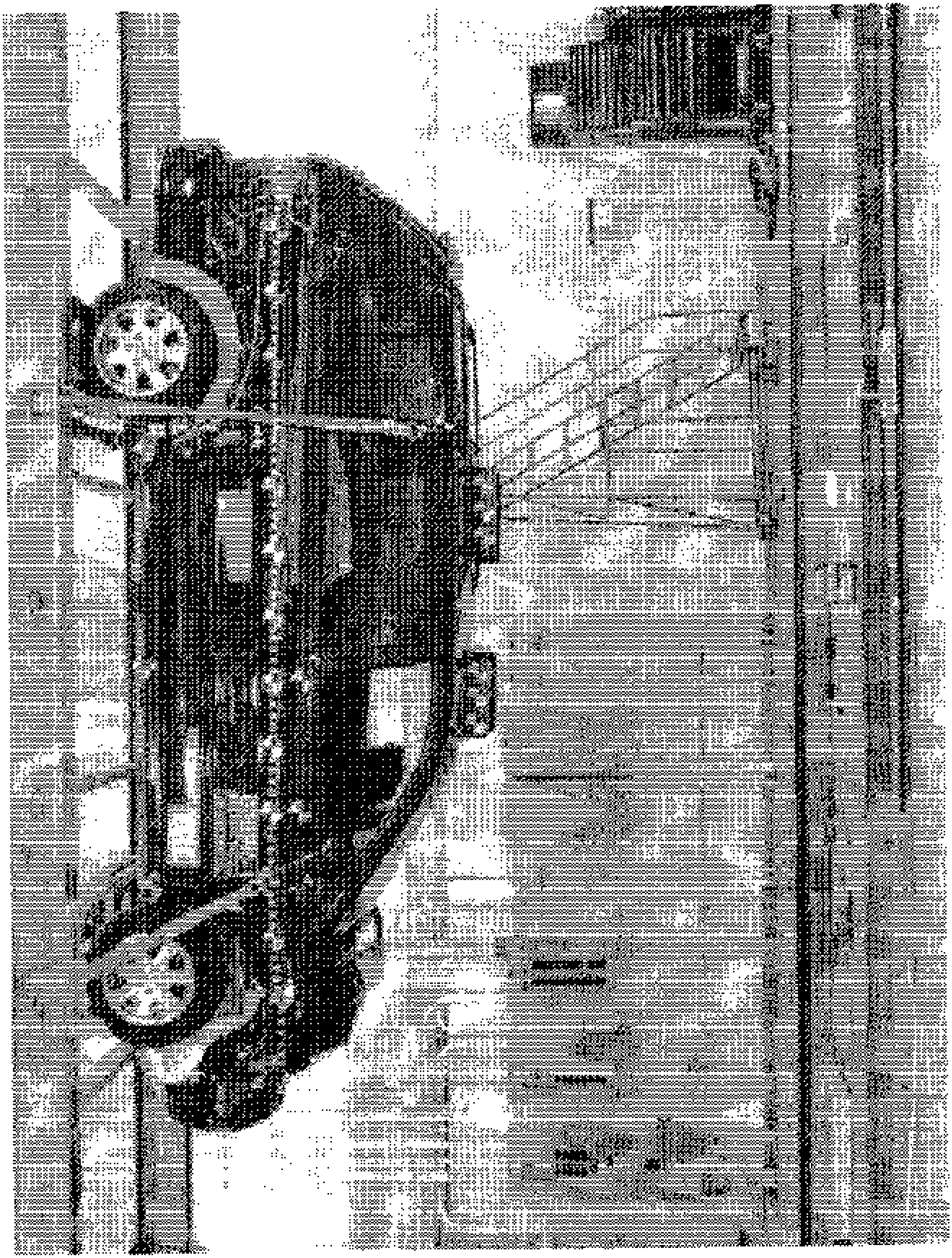


Image 63 Post-Test Vehicle on Static Rollover Device - 180° View

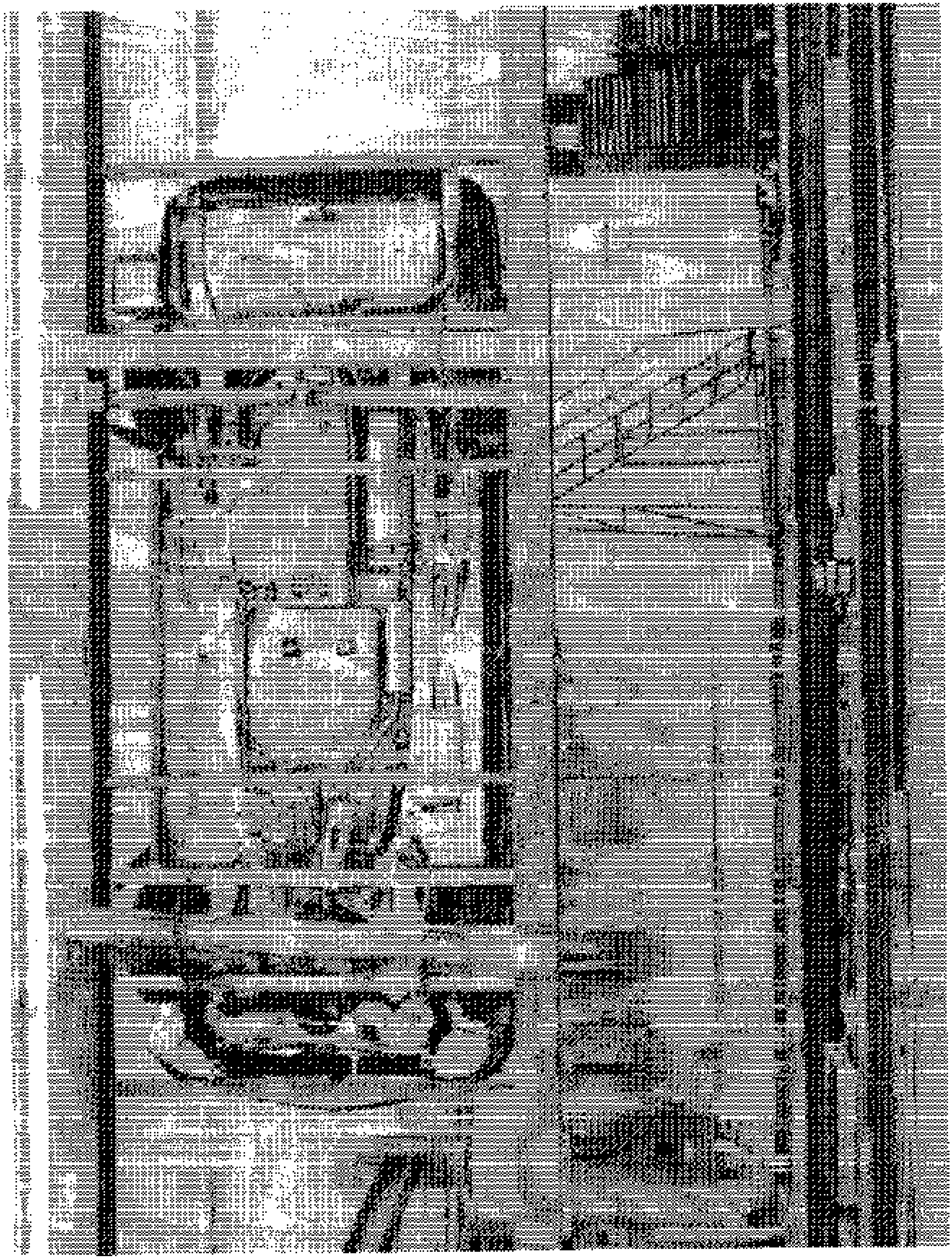


Image 64 Post-Test Vehicle on Static Rollover Device - 270° View

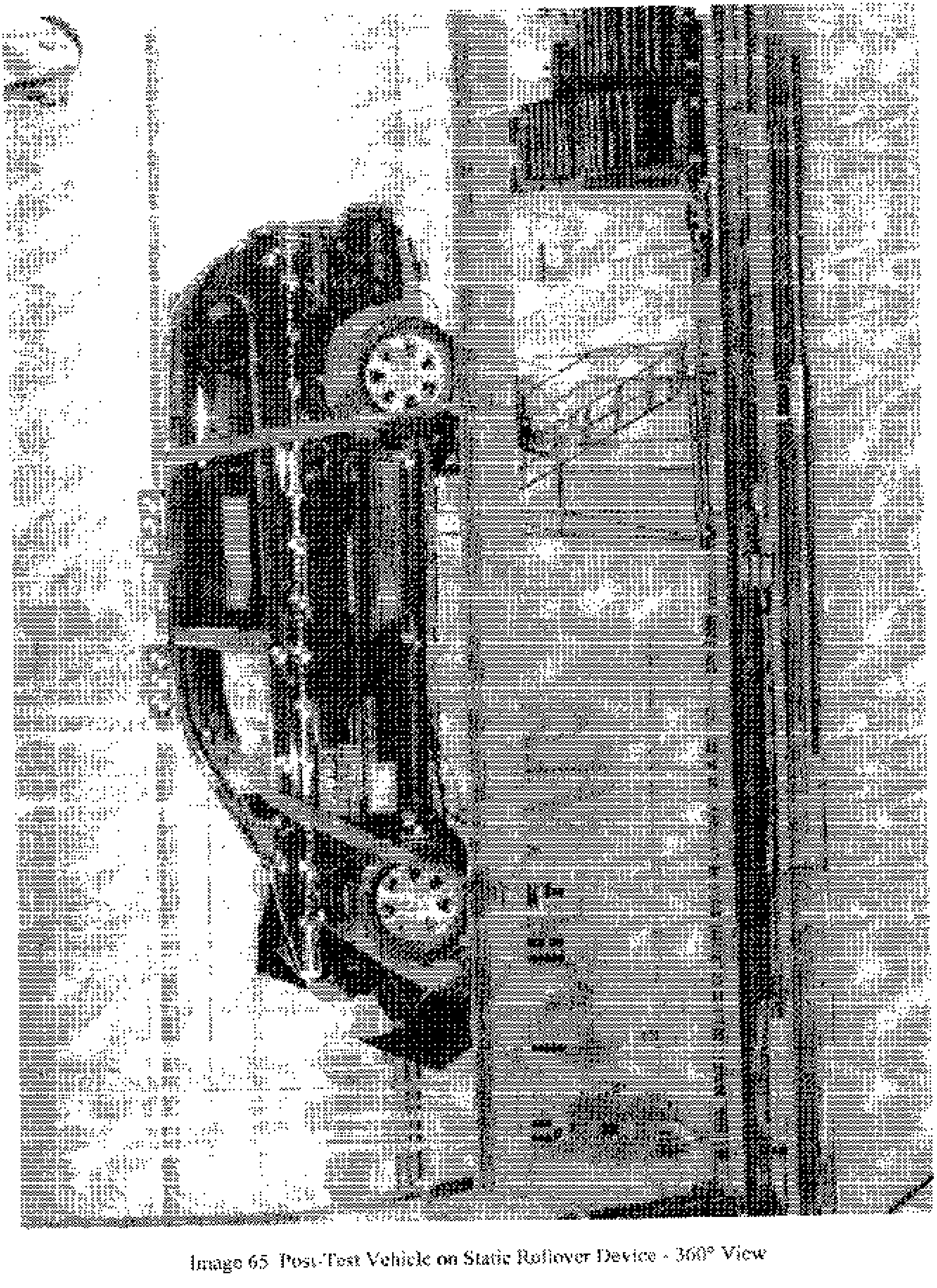


Image 65 Post-Test Vehicle on Static Rollover Device - 360° View

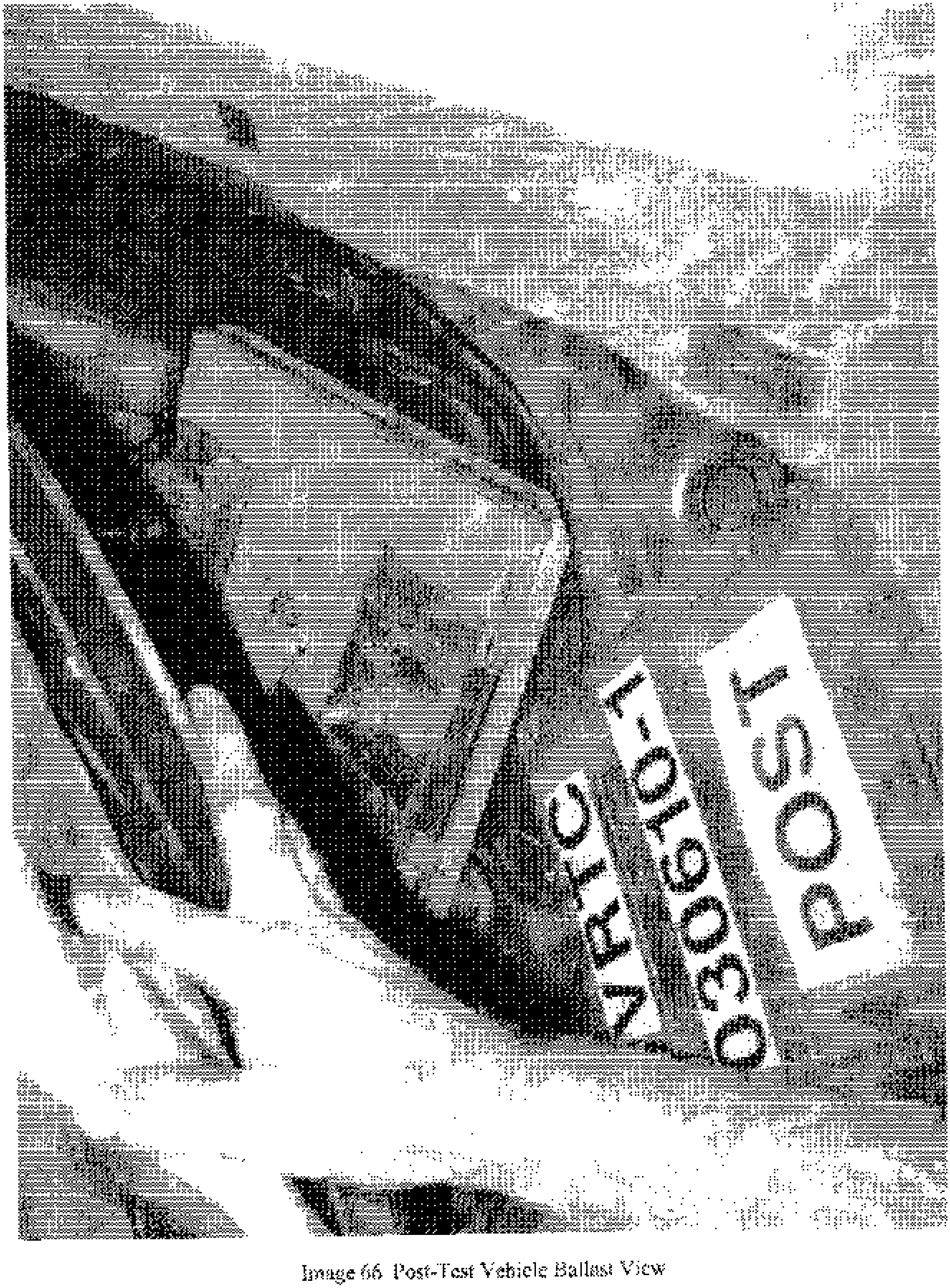
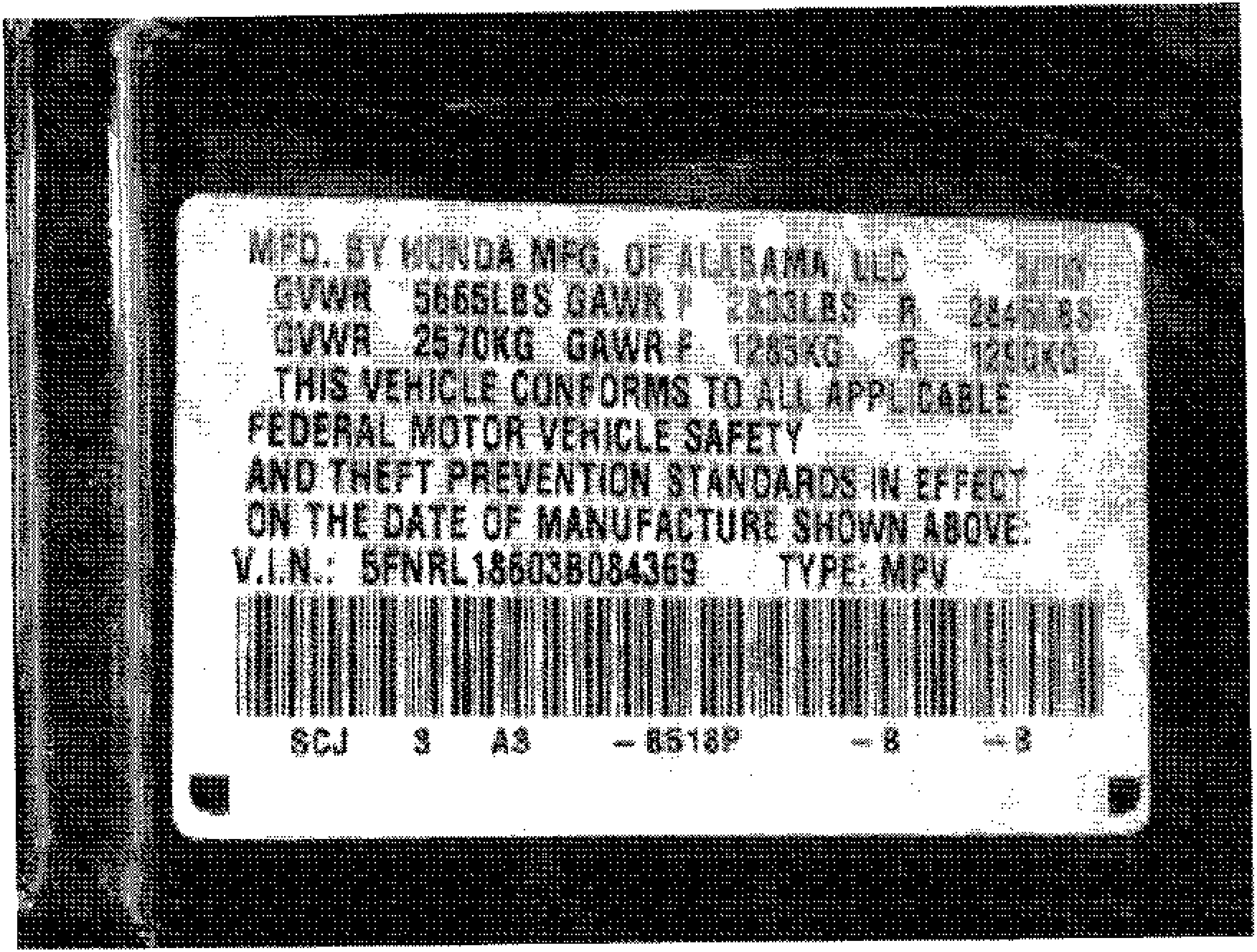


Image 66 Post-Test Vehicle Ballast View



MFD. BY HONDA MFG. OF ALABAMA, LLC [illegible]
GVWR 5665LBS GAWR F 2833LBS R 2844LBS
GVWR 2570KG GAWR F 1285KG R 1290KG
THIS VEHICLE CONFORMS TO ALL APPLICABLE
FEDERAL MOTOR VEHICLE SAFETY
AND THEFT PREVENTION STANDARDS IN EFFECT
ON THE DATE OF MANUFACTURE SHOWN ABOVE.
V.I.N.: 5FNRL18603B084369 TYPE: MPV
SCJ 3 A3 – B518P – 8 – B

Image 67 Vehicle Certification Label View

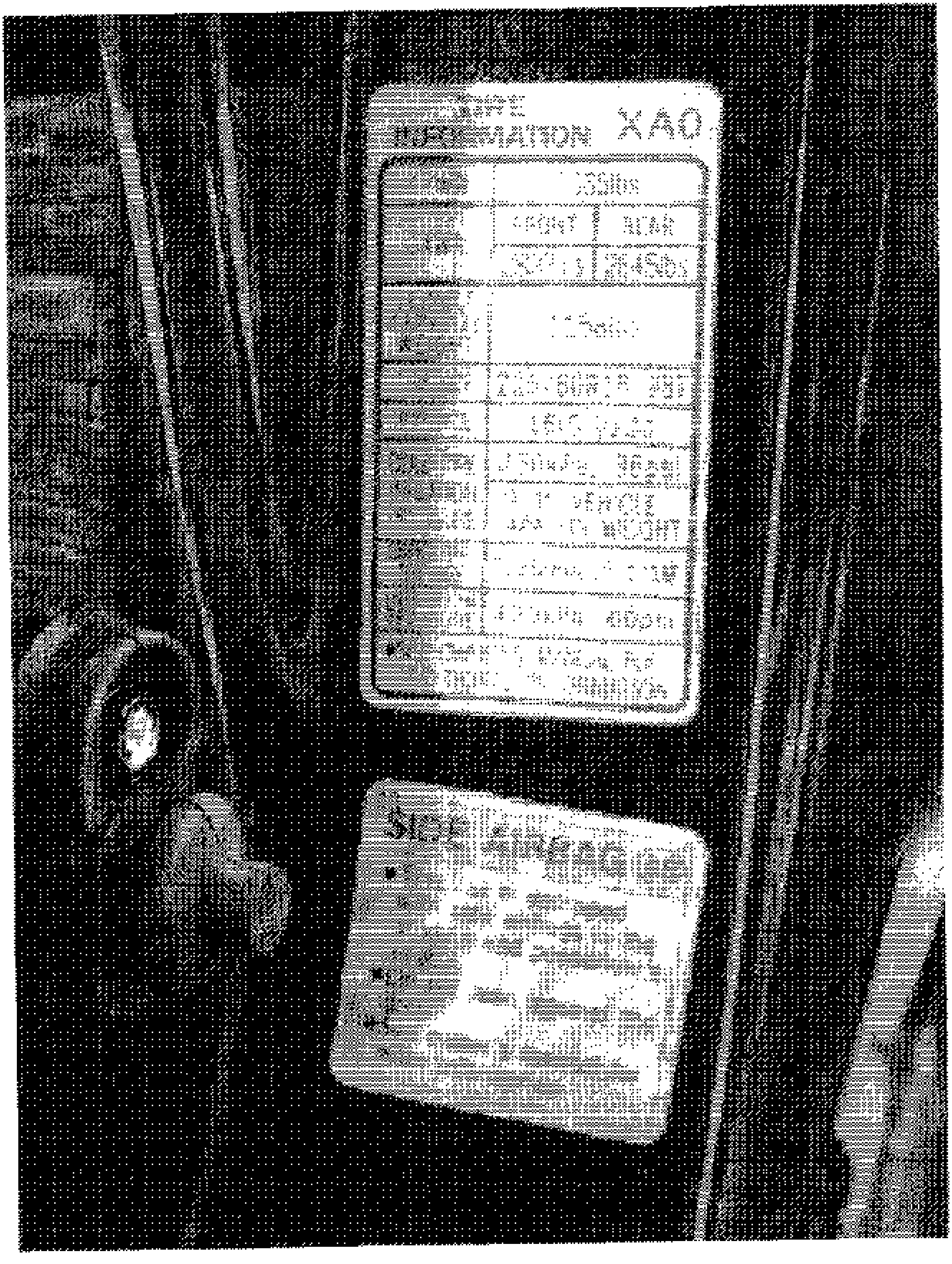


Image 68 Recommended Tire Pressure Label View

Appendix A

Test Equipment List and Calibration Information

Char Rep

: of Te 03061 Sy MI .U Name .U 6

Chan.#	sor #		nonic	script		ir.	e	Cal.		Gr	Mf	}	
002	4R49		(G1	ad Ac		wd	4385	4/21/2	OK	50:	Em		000L
003	37J		'G1	ad Ac		l	8845	4/22/2	OK	50:	Em	7	000T
004	9F9		G1	ad Ac		p	5604	4/21/2	OK	50:	Em		000T
005	205-2		(F1	ck Fo		d	.081	4/28/2	OK	50:	FT	1	
006	205-2		'F1	ck Fo		d	.145	1/28/2	OK	50:	FT	I	
007	205-2		F1	ck Fo		d	.628	4/28/2	OK	50:	FT	I	
008	205-2	X	(M1	ck Mc	X	Ear	8748	4/28/2	OK	50:	FT	1	
009	205-2	Y	(M1	ck Mc	Y	m	6704	4/28/2	OK	50:	FT	1	
010	205-2	Z	M1	ck Mc	Z	m	3469	4/28/2	OK	50:	FT	1	
011	509		G1	est Ac		wd	3787	4/21/2	OK	50:	En	7	KM5
012	A10		G1	est Ac		t	0196	4/21/2	OK	50:	En	7	000T
013	996		G1	est Ac		p	6877	4/22/2	OK	50:	En	7	KM5
014	CB1-2	05	D1	est De	on X	mm	5558	4/23/2	OK	50:	Ser	1	-2897
015	21-02		F1	ft Fen	rce Z	nee	.053	4/28/2	OK	50:	De		
016	21-02		ZF1	ght Fe	orce Z	nee	.068	4/28/2	OK	50:	De		
017	9P8		(G2	ad Ac		wd	3972	4/21/2	OK	50	Em	7	000L
018	560		G2	ad Ac		ft	3677	4/21/2	OK	50	Em	7	000L
019	KB4		G2	ad Ac		p	7152	4/21/2	OK	50	Em	7	000L
020	205-2		(F2	ck Fo		d	.636	4/28/2	OK	50	FT	1	
021	205-2		YF2	ck Fo		d	.019	4/28/2	OK	50	FT	1	
022	205-2		F2	ck Fo		d	7.420	4/28/2	OK	50	FT	1	
024	205-2	X	(M2	ck Mc	X	Ear	5693	4/28/2	OK	50	FT	1	
025	205-2	Y	YM2	ck Mc	Y	hn	1501	4/28/2	OK	50	FT	1	
026	205-2	Z	ZM2	ck Mc	Z	hn	5327	4/28/2	OK	50	FT	1	
027	014		G2	est Ac		wd	3979	4/22/2	OK	50	En		KM5
028	J29		G2	est Ac		ft	6877	4/21/2	OK	50	En		000L
029	MD5		G2	est Ac		p	9133	4/22/2	OK	50	En		000L
030	CB1-2	06	D2	est De	on X	mm	2327	4/23/2	OK	50	Se		-289
031	21-02		ZF2	ft Fen	rce Z	nee	.857	4/28/2	OK	50	De		
032	30-60		ZF2	ght Fe	orce Z	nee	.796	6/10/2	OK	50	Gs		

ann epoı 0/200. :00 A.

Na 'Test 0610- Syste MINI ne of DA

n.#	r#	Mı	tie	iptio			Ra			Po	I.		Grou	Mfg.	Mo	
1	0	LS		REA	AT		10	26	g	-	/2003	OK	-1	Endev	726	<-2-18
2	03	LS		REA	AT		98	54	g	-	/2003	OK	-1	Endev	726	<-2-18
3	0	RS	1	T RE	EAT		10	47	g	-	/2003	OK	-1	Endev	726	<-2-18
4	6	RS	1	T RE	EAT		99	98	g	-	/2003	OK	-1	Endev	726	<-2-18
5	3C27-	TE	1	OF EN	E X-A		98	98	g	-	/2003	OK	-1	Endeal	EG	36Q-2
6	8	BE	1	TOM	NGIN	XIS	10	57	g	-	/2003	OK	-1	Endev	726	<-2-18
7	1	RF	(	T FR	BRAK		99	36	g	-	/2003	OK	-1	Endev	726	<-2-18
8	8	LF		FRO	RAKI		99	48	g	-	/2003	OK	-1	Endev	726	<-2-18
9	2	DP	1	RUM	PANE	P	10	60	g	-	/2003	OK	-1	Endev	726	<-2-18
0	1	RE	1	DEC	AXIS		97	27	g	-	/2003	OK	-1	Endev	726	<-2-18

umm 5v Ty HYBI 15th Dt tio TC-5 YBR 5th Fc ICAI 1-03 (DKS !)J211

hsnar	ocati		Model	Na		M	cture	Sens.	V/	cal	Cl	Pos	ut	Flip
EDXG	lead A		'264-2	AI		En		0.020	g	2000	4/21/	Rwd		1
EDYG	lead A		'261-2	BC		En		0.034'	g	2000	4/22/	Lft		1
EDZG	lead A		'264-2	AC		En		0.0291	g	2000	4/21/	Up		1
EKXF	leck Fi		F-205	IF·	87-FX	FT		0.000	N	896.4	4/28/	Hd I	Rr	1
EKYF	leck Fi		F-205	IF·	87-FY	FT		0.000	1 N	896.4	4/28/	Hd I	Rt	0
EKZF	leck Fi		F-205	IF·	87-FZ	FT		0.000	N	344.6	4/28/	Hd U	Dn	0
EKXM	leck M	: X	F-205	IF·	87-MX	FT		0.005:	N-	282.5	4/28/	Rt E	t Shld	1
EKYM	leck M	t Y	F-205	IF	87-MY	FT		0.005:	8 N·	282.5	4/28/	Chn	m	0
EKZM	leck M	t Z	F-205	IF	87-MZ	FT		0.008	N·	282.5	4/28/	Chn	hld	0
STXG	Chest A	:	7264-2	J2		Er		0.023·	g	2000	4/21/	Fwd		0
STYG	Chest A	'	7264-2	AI		Er		0.020·	g	2000	4/21/	Lft		1
STZG	Chest A	:	7264-2	J2.		Er		0.021·	g	2000	4/22/	Up		1
STXD	Chest I	ion X	MCB1	14	897-5	Sc		1.685	m	100	4/23/	Stru	y Tem	0
FMZF	Left Fe	rce Z	2121	21	58	Dt		0.000	6 N	344.6	4/28/	Kne	l Rr	0
FMZF	Right F	Force Z	2121	21	57	Dt		0.000	8 N	344.6	4/28/	Kne	l Rr	0

A-4

umm; 6v Ty HYBI I 5th Di tio FC - 5 (YBR 5th F ICAL 1-03 (DKS 5)J211

hsnar	Locati		Model		Ns		M	cture	Sens.	V/		cal	C	Pos	ut	Flip
EDXG	lead A		/264-2	:	AC		En		0.024:		g	2000	4/21/	Rwd		1
EDYG	lead A		/264-2	:	J3:		En		0.024'		g	2000	4/21/	Lft		1
EDZG	lead A		/264-2	:	A/		En		0.029.		g	2000	4/21/	Up		1
EKXF	leck F		F-205		IF·	83-FX	FT		0.000		N	896.4	4/28/	Hd I	Rr	1
EKYF	leck F		F-205		IF·	83-FY	FT		0.000	1	N	896.4	4/28/	Hd I	Rt	0
EKZF	leck F		F-205		IF·	83-FZ	FT		0.000	3	N	344.6	4/28/	Hd I	Dn	0
EKXM	leck M	: X	F-205		IF·	83-MX	FT		0.005	7	N-·	282.5	4/28/	Rt E	t Shld	1
EKYM	leck M	. Y	F-205		IF·	83-MY	FT		0.005:	1	N·	282.5	4/28/	Chn	m	0
EKZM	leck M	: Z	F-205		IF·	83-MZ	FT		0.008	5	N·	282.5	4/28/	Chn	shld	0
STXG	hest A	:	7264-2	'	J2		En		0.023.		g	2000	4/22/	Fwd		0
STYG	hest A	'	7264-2	:	A/		En		0.026.		g	2000	4/21/	Lft		1
STZG	hest A	.	7264-2	:	A/		En		0.025.		g	2000	4/22/	Up		1
STXD	hest L	ion X	MCB1		14	897-5	Se		1.677		m	100	4/23/	Stm	ty Frm	0
FMZF	eft Fe	orce Z	2121		21	54	De		0.000	1	N	344.6	4/28	Kne	el Rr	0
FMZF	ight F	Force 2	2121		21	53	De		0.000	3	N	344.6	4/28	Knc	el Rr	0